Entrepreneurial Marketing Orientation: The Influence on the Adoption and Use of Digital Marketing Technology in Small Tourism Businesses

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A thesis submitted in partial fulfilment of the requirements of Bournemouth University for the degree of Doctor of Philosophy

October 2020

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ABSTRACT

Digital marketing technology has become an integral part of modern society and has changed communication between businesses and their customers; a change that is rooted in the speed of the evolution of digital technology and its adoption by consumers and businesses. Tourism customers are increasingly using mobile and online technology to plan and decide their destination and accommodation. As a result, small tourism business owner-managers need to change the way they digitally interact with their customers.

Marketing as a practice continues to evolve and, as an academic discipline, requires research to understand the way that tourism businesses digitally engage with customers. Entrepreneurial marketing provides the basis for a conceptual framework to identify how small tourism businesses may address the challenges of marketing communication in the digital era. The impact of an entrepreneurial marketing orientation within the owner-manager on digital marketing technology adoption and use is being studied for the first time within a tourism and hospitality context.

There are clear reasons for small businesses to respond to and embrace digital marketing technology – the problem is that many are not. Adopting and integrating digital technology can facilitate marketing communication and related business processes. However, the owner-manager is required to develop a culture or mindset to maximise the benefits digital marketing technology can provide and this will inevitably require some element of change within the business. The small tourism business owner-manager is the catalyst for change within the organisation and plays a central role in developing digital competences and integrating marketing technology into existing communication practices.

This study employs a quantitative, exploratory, research approach whereby the literature review has informed the development of a conceptual marketing-led framework, constructs, variables and relationships for a survey investigation.

There are two outcomes from this study to both theory and practice. Firstly, a contribution has been made to entrepreneurial marketing theory and small tourism business literature by exploring the extent to which an entrepreneurial marketing orientation influences the adoption and use of digital marketing technology at a higher and lower order level. This brings a unique perspective on entrepreneurial marketing theory and, for the first time, is applied to small tourism businesses. Secondly, the research may inform policy and practice through the use of the marketing-led framework and highlighting areas to focus on for greater digital marketing technology integration and in identifying areas for support.

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GLOSSARY OF TERMS

Blindfolding - a sample reuse technique that omits part of the data matrix and uses the model estimates to predict the omitted part. It indicates a model's out-of-sample predictive power.

Bootstrapping - a resampling technique that draws a large number of subsamples from the original data (with replacement) and estimates models for each subsample.

Composite variable - a linear combination of several variables.

Construct - an unobservable abstract, complex concept.

Covariance - a measure of how variables vary together.

Endogenous variable - dependent variable.

Exogenous variable - independent variable.

f^2 effect - a measure to assess the relative impact of a predictor construct or independent variable on an endogenous or dependent variable.

Firewall - a network security device that monitors and controls traffic to and from a network, blocking or allowing traffic based on predetermined security rules.

First order construct - a concept that is measured formatively or reflectively using indicators with directly attributable values.

Gross Value Added - a measure of the value of goods and services produced in an area, industry or sector of an economy.

Latent variable - unobserved theoretical or conceptual elements.

Mediation - when one or more mediator variables explains the influence of an exogenous construct on an endogenous construct, may be partial or full mediation.

Moderation – occurs when the effect of an exogenous latent variable on an endogenous latent variable depends on the values of a third variable.

Path coefficient - indicates the direct effect or cause of a variable on another variable (effect) and estimates path relationships in the structural model.

PLS-SEM - partial least squares structural equation modelling.

PLS-SEM measurement model - an element of a path model that includes indicators and their relationship with the construct (also known as the outer model).

PLS-SEM structural model - the theoretical or conceptual element of the path model containing the latent variables and their path relationships (also known as the inner model).

q^2 effect - a measure to assess the relative predictive relevance of a predictor construct or independent variable on an endogenous construct or dependent variable.

Q^2 value - a measure of a model's predictive power.

R^2 effect - the amount of explained variance by an exogenous variable on an endogenous latent variable.

Second order construct - a concept formed or reflective of multiple first order constructs that may be summarised using values.

ACKNOWLEDGEMENTS

My thanks go to my supervisors starting with Dr Philip Alford who provided me with the opportunity to return to Bournemouth University as a postgraduate researcher to study for my Doctorate and for his advice regarding the small business world he has worked in for many years. I must also thank Professor Roger Vaughan who did not let a little think like retirement stand in the way of helping me get to the finishing line, his endless attention to detail and consistently improving my writing. Next, my thanks go to Dr John Beavis who made the world of quantitative statistical analysis accessible to me and enabled me to actually enjoy the process from beginning to end. Finally, my gratitude to Professor Dean Patton who joined my supervisory team with his straight talking and being available when needed. I must also thank my informal supervisor and mentor Professor Heather Hartwell who provided me with many opportunities to enhance my time as a PhD student.

Inspiration and motivation came from a number of fellow students when my journey started, namely Dr Sarah Price, Dr Sarah Pyke, Dr Emma Mosely and Carmen Martens, and latterly Gunn-Marie Holdo and Natalia Lavrushkina.

I would like to thank the Entrepreneurial Marketing research community in particular Dr Rosalind Jones, Dr Zubin Sethna, Dr Fabian Eggers, Professor Sussie Morrish and everyone involved in this exciting discipline for their warm welcome into their community, and their encouragement and advice.

Finally, to my family and friends, for listening, being patient and helping me keep going to the end.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The purpose of this thesis is to examine the relationships between three constructs – entrepreneurial marketing orientation (EMO); attitude towards digital marketing technology of the business owner-manager (ADT); and the adoption and use of digital marketing technology (AUDT) in small tourism businesses (STBs). The study examines the influences of an EMO and ADT on the adoption and use of digital marketing technology in STBs. Consequently, for the first time, this research sets out to establish the characteristics of an EMO in the STB owner-manager that may influence the adoption and use of digital marketing technology to create value for their customers and their business.

The aim of this chapter is to identify the main conceptual areas within the thesis. It is structured into sections and firstly provides the rationale for the research and why it is important in section 1.2. The context of the research is set out in section 1.3 including the STB sector and its importance, small tourism business marketing style and the challenges they face when adopting and using digital marketing technology. Lastly, in this section, the concept of entrepreneurial marketing (EM) is introduced as an approach through which to study the STB owner-manager, their marketing orientation and how their orientation influences the adoption and use of digital marketing technology (AUDT). The research aim and objectives in section 1.4 lead into the research methodology summary (1.5), demonstrating how the study meets academic requirements in order to satisfy the research objectives. In section 1.6, the proposed theoretical and practical contributions the thesis aims to make are outlined and the chapter closes with the thesis structure in section 1.7.

1.2 Rationale for the research

The digital landscape in which all businesses operate has been continually subject to change, complexity and ambiguity which has impacted on the marketing

environment (Morris et al. 2002). Digital technology has become an integral part of modern society (Barnard et al. 2017) and it has revolutionised marketing communications (de Swaan Arons et al. 2014). Consequently, the adoption and utilisation of digital technology across the world has emerged as an important research topic (Peltier et al. 2012). The successful implementation of digital marketing technology is believed to facilitate the adaptation to rapidly changing markets and the opportunities they offer (Aldebert et al. 2011; Thompson et al. 2013) by helping to build sustainable competitive advantages (Martin and Matlay 2003; Thompson et al. 2013; Barnard et al. 2017; Ransbotham and Kiron 2018). In addition, digital technology enhances marketing and business practices, and is critical for leveraging systems in the process of customer-centric marketing (Peltier et al. 2012).

There are growing expectations for businesses to improve and generate value through exploiting digital opportunities (Morgan-Thomas 2016), yet there is a lack of digital marketing adoption in micro and small tourism businesses (STBs), despite the majority of customers in the tourism and hospitality sector planning and booking their travel breaks online (ABTA 2018). Indeed, less than 2% of businesses, including tourism and hospitality, are taking full advantage of mobile technology, social media, cloud computing and big data technology to communicate with and enhance their customers' experience (European Tourism Forum 2016). The implications of the lack of adoption and use of digital marketing technology in STBs are reduced productivity; inefficiency; reduced employment; limited growth; unrealised opportunities; underutilised resources and limited customer value for businesses, industries and economic regions (Strategic Policy Forum on Digital Entrepreneurship 2015).

The practice of marketing in small businesses and STBs has been shown to be different from larger businesses in that it is not traditional because it is less organised, less planned or less formal and very much led by the controlling individual's characteristics and requirements (Whalen et al. 2015). The study of small businesses and entrepreneurs has shown that they provide some of the best examples of marketing (described as entrepreneurial and distinguishable from traditional marketing) due to the concepts of size, market, opportunity, speed, risk

and uncertainty (Whalen et al. 2015). However, from a small business perspective, marketing scholarship has not kept pace with marketing practice (Lutz 2011, Webster and Lusch 2013, Kumar 2015) and deficiencies exist in terms of frameworks to help understand the adoption and use of digital marketing technology in STBs.

The global expansion of digital technology and its increasing adoption by tourism customers (Ward 2015) presents the United Kingdom (UK) tourism industry with new opportunities for growth (by extending their reach into new markets), employment and the economic development of destinations (Adams 2014; Foroudi et. al 2017; Roper and Bourke 2018). However, this opportunity comes with a changing marketing environment for all businesses (Jackson and Ahuja 2016), STBs included. While the tourism industry was an early adopter of technology and continues to be a dominant user (Aldebert et al. 2011), this is not the case with STBs. The barriers and challenges to digital marketing technology adoption by STBs are known, however, understanding how to address the lack of adoption and use has not been fully explored (Jones at al. 2003; Chaffey and Patron 2012; Hameed et al. 2012; Peltier et al. 2012; Dredge et al. 2018; Alford and Jones 2020). The continuing low levels of adoption and use of digital marketing technology by STBs, highlights the need for research to understand why this is the case and how to address this phenomenon for both practitioners and policy makers.

Entrepreneurial marketing (EM) theory provides the STB owner-manager with a potential approach to adopt and use digital marketing technology as EM characteristics complement the opportunities that digital marketing offers (Quinton and Harridge-March 2006; Harrigan et al. 2012a; Jones et al. 2014) in addition to the unique seasonal, perishable and intangible service offering characteristics of the STB. EM does not follow traditional marketing practices mainly found in larger businesses, but is more informal and organic, and suits a dynamic operating environment (Hills et al. 2008) and the style of marketing in STBs.

EM provides three unique sets of characteristics that may be examined to determine its influence on digital marketing technology adoption and use in the STB, and on the STB owner-manager’s attitude towards digital marketing

technology. Firstly, the entrepreneurial characteristics of innovativeness, proactivity, opportunity focus and risk management and their fit to digital marketing technology and the use of customer data. Using new methods of marketing communication in the STB as they develop and evolve encompasses both risk and innovation and, from the information and reach that digital marketing technology provides, the opportunity to proactively search for new customers and improve customer experiences. Secondly, the marketing insights that digital marketing technology provides through analysis of the data can increase customer focus and value creation to generate loyalty and favourable customer reviews. Finally, the extent to which limited resources are leveraged by using digital marketing technology can be considered or whether digital marketing technology requires additional resources within the STB in order to maximise its use.

There are many frameworks explaining digital technology adoption in academic literature specifically aimed at the small business (for example Jones et al. 2014; Nguyen et al. 2015) However, marketing-led adoption frameworks that are relevant to the STB to guide their engagement with digital marketing technology are largely absent. There is a requirement for digital marketing frameworks due to the use of digital channels by today's consumers on their computers, smart phones and tablets (Ritz et al. 2019) and the subsequent impact on communication channels used by businesses providing goods and services (de Swaan Arons et al. 2014).

Small business literature and, particularly STB literature, lacks conceptual and empirical research on digital marketing technology adoption and use (Hjalager 2002; Shaw and Williams 2010; Kriechbaumer and Christodoulidou 2014). In particular, two papers from the beginning of the last decade highlighted the opportunity for further research. The first paper (Morrison et al. 2010) reviewed 35 years of critical academic contributions in small business tourism research, yet the link between marketing and technology were missing from their findings. Similarly, the second paper by Thomas et al. (2011) determined marketing as an area that required theoretical development for a full understanding of STBs as they are "under theorised and under researched" (Thomas et al. 2011, p.964), despite marketing being an established area in tourism research. The effective use of

digital marketing technology in STBs is not presently understood and warrants further investigation (Thomas et al. 2011). Research provides an opportunity to offer insights into how STBs may improve marketing performance in fast changing environments (Pascal and Shin 2015; Chaston 2016; Foroudi et al. 2017; Roper and Bourke 2018) and highlights a number of areas inviting academic contribution.

Firstly, in the developing field of research at the entrepreneurial marketing interface, the link to digital marketing technology has not been adequately accounted for (Morris et al. 2003; Quinton and Harridge-March 2006; Gilmore 2011; Morrish et al. 2020). There has been little attempt to develop conceptual frameworks for evaluating the effectiveness of using digital marketing in small businesses (Eid and El-Gohary 2013; Alford and Page 2015) and whilst marketing and entrepreneurship theories increasingly overlap, there is a lack of conceptual frameworks to incorporate and integrate the two (Lam and Harker 2015). Greater understanding is required on how EM facilitates the exploitation of digital marketing technology, providing an interesting possibility for quantitative research (Miles et al. 2011).

Secondly, there has been limited investigation into the individual STB owner-manager and how entrepreneurial characteristics affect their marketing approach (Li 2008; Thomas et al. 2011; Franco et al. 2014; Fillis 2015). There is little research with regard to the actual practice of linking EM to digital marketing technology (Gross et al. 2014; Morrish et al. 2020) and how it can be quantitatively measured (Carson and Coviello 1996; Jones and Rowley 2009; Kurgun et al. 2011; Sullivan Mort et al. 2012; Hills and Hultman 2013; Gross et al. 2014). Research is required to examine the influence of the owner-manager's ability to recognise the opportunities digital marketing technology can create (Hills and Hultman 2013) and generate insight for a competitive advantage (Thompson et al. 2013; Welter et al. 2016; Barnard et al. 2017; Ransbotham and Kiron 2018).

Finally, a further area for EM investigation was identified by Whalen et al. (2015) regarding the requirement to develop measures for EM and assess how its characteristics impact on small businesses (Lehman et al. 2014). This study

requires an EM measurement scale to be created in order to assess its influence on the adoption and use of digital marketing technology in the STB.

1.3 Research context

1.3.1 The small tourism business sector

Before the Covid-19 virus pandemic, the tourism industry contributed 7.2% or £145.9bn of the UK gross domestic product to the UK economy and employed 3.3m people (Tourism Alliance 2019). According to figures from Deloitte (2013b), UK tourism is set to be worth £257.4bn by 2025, creating more than 630,000 additional jobs, however, the industry will take time to recover from the Covid-19 virus pandemic in 2020 (visitbritain.org 2020). Small (10-49 employees) and micro (0-9 employees) businesses dominate the UK tourism industry (Morrison and Teixeira 2004; Adams 2014) as almost 90% of the 241k tourism businesses employ fewer than 25 people (Tourism Alliance 2019). The majority of STBs are accommodation, food, and beverage service providers (152k) that generate £45.1m turnover (Department for Business, Energy, and Industrial Strategy 2019b). Therefore, STBs are an essential part of the future growth within the industry as well as being critical to local economies (Adams 2014).

The complexity of the tourism industry has led to misunderstandings due to generalisations and assumptions being made about the sector (Ateljevic 2007). An example of this is success being traditionally defined by competitive, financial and market position, which fail to account for the lifestyle choice of owner-managers that underpin many tourism businesses (Thomas et al. 2011). In addition to small business limitations, STBs are also faced with somewhat unique operating conditions such as rural locations and fluctuations in demand that come from seasonality and the requirement to cover off-peak and out of season costs (Getz and Nilsson 2004; Ateljevic 2007).

One way to characterise the STB sector is in terms of their limitations - resources (finance, time, knowledge, personnel), expertise (lack of specialisms) and impact in terms of market share. The operating environment highlights the limitations of

STBs in three areas – uncertainty, innovation and change (Storey 1994). Due to their size and limited market share, the STB faces greater environmental uncertainty (Bocconcelli et al. 2018) and an absence of control and influence when it comes to changes in market conditions. This can have two outcomes – higher business failure rates (Hopkins 2018) and higher levels of innovation due to their size and flexibility. The innovation that results from change can lead to a competitive advantage as the STB can react faster because they are less committed to maintaining existing processes and practices (Fillis and Wagner 2005; O'Dwyer et al. 2009b).

One area of uncertainty that STBs face is the continuous development of digital marketing technology that has changed the way businesses engage with customers and vice versa (de Swaan Arons 2014). As noted earlier, there is a lack of digital marketing technology adoption in the STB sector, indicating the challenges such firms face operating in today's technologically dynamic environment, coined as the third industrial revolution (Economist 2012). Part of the challenge for the small business and the STB is which marketing technologies to adopt and how to use them. This is an important consideration as it is known that four out of five customers in the tourism and hospitality sector plan and book their travel breaks online (ABTA 2018). The lack of digital marketing technology adoption has potential repercussions on the sustainability of the STB and on the contribution the sector makes to gross domestic product and employment resulting in a negative impact upon the UK economy (for example, Blackburn et al. 2013; Edinburgh Group 2013; Bocconcelli et al. 2018).

As the key business decision-maker, the small business owner who manages the business (the owner-manager) defines its direction particularly when it comes to operational change (Peltier et al. 2012) and practicing a different form of marketing. The influence of the owner-manager is manifested in their philosophy, motivation, control, and operating style, affecting all aspects of the business. The unit of analysis for this study is the STB owner-manager as they are the main decision-maker and their marketing orientation drives the direction of the business as well as the adoption and use of digital marketing technology (Fillis 2015).

1.3.2 Marketing in small tourism businesses

Marketing in various forms is recognised as an important element in achieving a competitive advantage and in the successful performance of any small business (Elliott and Boshoff 2007; O'Dwyer at al. 2009a; Eid and El-Gohary 2013; O'Dwyer and Gilmore 2013; Thompson et al. 2013; Morrish et al. 2020). The particular style of marketing within the context of small businesses has been examined over the past four decades (Bocconcelli et al. 2018) and is largely influenced by the limitations they face. The limitations influence the small business approach to marketing in two distinct ways. Firstly, limited resources may encourage a culture of innovative and creative solutions to marketing challenges in some businesses (O'Dwyer et al. 2009a). Secondly, marketing is not always a priority within the business and may be considered peripheral due to the ability of some small firms to continue to operate without employing traditional marketing practices (O'Dwyer and Gilmore 2013). Marketing in some form does exist, albeit in an unconventional way which has sometimes been described as unique to small businesses – it is marketing that is influenced by market conditions, customers and the owner-manager (Chaston 2016).

Marketing in STBs reflects the characteristics of small business marketing. However, certain elements have greater importance. One example is the business network and how it can potentially be extended by digital technology. In addition to the marketing efforts of the Destination Management Organisation (DMO) to which STBs often belong, tourism businesses use collaborative marketing initiatives to encourage visitors to a destination and provide a variety of products and services for the duration of their visit (Friel 1998). Furthermore, collaborating with competitors in tourism businesses can be beneficial (Gilmore 2011), especially in rural tourism settings when demand is high (Komppula 2014).

Relationship marketing and the customer are also important aspects of the STB. As the STB and customer create the intangible and inseparable service encounter together (Coviello et al. 2006; Yildirim and Bititci 2006), STBs can develop customer value through their close relationships with customers that generate timely, iterative feedback (Gilmore 2011; Harrigan et al. 2012b; Sullivan Mort et

al. 2012). Customers provide feedback in the face-to-face setting and more recently through digital marketing applications such as review sites like Tripadvisor™.

Due to the size of the business, the owner-managers in STBs are often generalists not specialists and are concerned with the operational management of day-to-day activities (Ateljevic 2007). Marketing competes with other business functions (administration, personnel and finance management) and differs in terms of the priority given to it according to the owner-manager's motivation. The owner-manager's influence on marketing is not only shaped by individual characteristics, management style, personal goals and behaviour, but also by their skill set, which is often limited and results in informal, unstructured and reactive marketing (Gilmore et al. 2001).

Marketing control and decision making tend to stem from the orientation of the STB owner-manager (Fillis and Wagner 2005). Understanding the variety of STB owner-manager orientations, behaviours and motivations that shape STB marketing is presented in the continuum from the lifestyle individual to the entrepreneurial individual (Ateljevic and Doorne 2000; Hodson and Whitelock 2003). The lifestyle STB owner-manager is not necessarily motivated by growth and profit maximisation, and marketing may be less important to the business than the location of where they live and work with their family (Getz and Carlsen 2005). Conversely, innovation, resources leveraging, risk and opportunities drive the entrepreneurial STB owner-manager and their approach to marketing. Consequently, it is important to understand the STB owner-managers' marketing orientation and therefore, its influence on digital marketing.

1.3.3 Digital marketing technology adoption and use and small tourism businesses

Since its emergence in the 1990s, digital marketing has led to unprecedented changes in the way businesses communicate and engage with customers (de Swaan Arons et al. 2014). Simply defined by Kannan and Li (2017), digital marketing is a collaborative process for creating, communicating, delivering and sustaining value to all stakeholders, enabled by digital technology. Whilst attention has been

focused on digitalisation in the manufacturing and industrial sectors, less attention has been paid to understanding the challenges and obstacles in tourism, and the specific types of policy responses and interventions that are appropriate to encourage the adoption and use of digital marketing technology in different tourism stakeholders (Dredge et al. 2018).

The adoption and use of digital marketing technology can be divided into two main themes for the STB. Firstly, the benefits that digital marketing technology can bring become the rationale for its adoption and use (for example, Simmons et al. 2011; Peltier et al. 2012). Secondly, the challenges and barriers to adoption businesses face have been examined in order to explain the low levels of engagement (for example, Ritchie and Brindley 2005; Wymer and Regan 2005; Barba-Sanchez et al. 2007).

The adoption and use of digital marketing technology can help to create sustainable, competitive advantages, and enable adaptation to rapidly changing markets and exploit the opportunities they offer (Martin and Matlay 2003; Peltier et al. 2012; Morgan-Thomas 2016; Barnard et al. 2017; Ransbotham and Kiron 2018). When successfully implemented, digital marketing technology can extend the reach of a business into new markets and it can offer up new ways of communicating with existing and potential customers when opportunities arise, saving the STB time and money and resulting in sustainable competitive businesses (Eid and El-Gohary 2013).

The barriers and challenges to digital marketing technology adoption by small businesses are many and well documented (Ritchie and Brindley 2005; Wymer and Regan 2005; Wolcott et al. 2008; Simmons et al. 2011; Alford and Page 2015). Research has found that the size of the company is a key factor when it comes to using digital technology (European Tourism Forum 2016). The size of the STB and their limited marketing resources (Simmons et al. 2011; Jones and Suoranta 2013) are often reflected in the lack of knowledge, skills and expertise required for engaging with digital marketing technology and maximising the opportunities it can bring. Therefore, STBs with limited resources require support for transforming their digital marketing adoption and use and research has found that DMOs do not

provide enough of the type of support they require (McCamley and Gilmore 2017). Furthermore, a 'one-size-fits all' policy approach to digital marketing is inappropriate given the diversity of tourism SMEs (Dredge et al. 2018; Alford and Jones 2020).

The evolution and continuous change of the marketing technology landscape challenges the STB owner-manager (Aldebert et al. 2011; Jones et al. 2003). Developing an awareness of the service the tools provide via a proliferation of communication channels requires a learning focus and a certain skill set (Leeflang et al. 2014). Creating a business website or social media account can be relatively straightforward for the STB and may be cost effective as many of the tools and applications are free of charge (Andal-Ancion et al. 2003). Being free of charge may be a reason for the high levels of adoption as found by Chaffey and Patron (2012), however, they also found that usage rates are low (Chaffey and Patron 2012; Taiminen and Karjaluoto 2015). Integrating digital marketing technology into existing marketing practices (for example website analytics) is a struggle for the STB owner-manager (Chaffey and Patron 2012; Harrigan et al. 2012b; Royle and Laing 2014) resulting in a piecemeal approach to digital marketing. Another challenge is generating customer insight from the operational management and interpretation of the volume of data that digital marketing technology generates (Leeflang et al. 2014). Furthermore, the owner-manager often requires advice and guidance when selecting and using digital analytics applications (Chaffey and Patron 2012).

The use of intermediaries that facilitate online booking (for example, Booking.com™) provide STBs with a digital presence and the ability to utilise expeditious promotions to maximise their perishable service offering. However, they also distance the STB from customer data because, for example, at the booking stage, the intermediary collects customer information at the point of contact. The above factors can result in a dependency on third party skills and may in part, explain the lack of engagement with digital marketing technology adoption in STBs (Simmons et al. 2008; Simmons et al. 2011).

Research has found that the small business owner-manager's attitude towards digital marketing technology adoption is grounded in their clear perception of the benefits and costs (Ritchie and Brindley 2005; Simmons et al. 2008; Wolcott et al. 2008). In addition, the owner-manager's attitude towards change, their disposition towards digital marketing technology, and some knowledge of digital marketing technology all influence its adoption. Conversely, a lack of motivation to learn new digital marketing skills and an unawareness of latent benefits of digital marketing technology, on the part of the owner-manager, lead to low levels of engagement (Simmons et al. 2008; Peltier et al. 2012; Thompson et al. 2013). Consequently, the owner-manager's attitude towards digital marketing technology as well as their marketing orientation is a key factor when adopting and using digital marketing technology.

In addition to the implications for limited adoption and use of digital marketing technology by the STB, there is a lack of research in how marketing insights can generate opportunities from the use digital marketing technology. The limited resources, appropriate support and possible limited digital marketing skills and expertise of the STB owner-manager may influence adoption as well as the STB reliance on digital intermediaries. Therefore, by bringing together knowledge from the small business and mainstream marketing literature the opportunity is created to add to the evolving EM discipline.

1.3.4 Entrepreneurial marketing

The rate of digital marketing technology change has had a significant impact on the small business sector including STBs (Shaw and Williams 2010). As a result, the STB owner-manager needs help to manoeuvre their way through the digital marketing technology landscape (Ioniţă 2012). The changing marketing environment and in particular the impact of digital marketing technology development and how to use it, creates uncertainty that favours an entrepreneurial marketing (EM) approach as the theory emanated from the practice of businesses operating in dynamic conditions (Morris et al. 2002; Hills et al. 2008; Harrigan et al. 2013).

As market boundaries expand through globalisation and new technology develops, emerging theories reflect the continuing evolution of marketing with new ideas adding to the discipline. Academic research at the marketing and entrepreneurship interface (MEI) has led to EM being identified as a different style of marketing from the traditional marketing methods that dominated the 20th century (Morris et al. 2002). The EM paradigm is based in the context of entrepreneurship and the study of entrepreneurs and small businesses.

Morris et al. (2002) developed an early definition of EM by combining the elements of entrepreneurship and marketing as follows: -

> *"the proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resource leveraging and value creation" (Morris at al. 2002, p.5).*

Innovativeness, opportunity focus, proactivity and risk management represent entrepreneurship, and customer focus and value creation provide the cornerstones of marketing. Resource leveraging provides the connection to small business marketing due to their limited resources and the restraints they face.

EM developed through inductive research that investigated the marketing similarities and differences in how small and medium enterprises operate (Miles et al. 2015). EM has mainly been associated with the marketing approaches of small businesses with limited resources and sometimes the informal, unplanned, visionary, marketing focus of entrepreneurs (Morris et al. 2002). Whilst there is still a focus on the customer, EM is different from traditional marketing because it is not always logical and sequential but can be unconventional and organic and it has proven to be successful in unorthodox ways (Hills et al. 2008). What has previously been considered a limitation to the development of small businesses (i.e. their lack of planning, ways of decision making and approach to marketing) is considered a strength within the theory at the marketing and entrepreneurship interface.

The dynamic marketing environment, and in particular the impact of digital technological developments, creates levels of uncertainty that suit an EM approach (Morris et al. 2002) as the theory emanated from the practice of businesses operating with resource constraints in dynamic contexts (Hills et al. 2008; Harrigan et al. 2013) as described by Morris et al. (2002).

> *"an integrative construct for an era of change, complexity, chaos, contradiction and diminishing resources" (Morris et al. 2002, p.5).*

A changing environment can encourage an holistic entrepreneurial orientation (Miles and Arnold 1991), compelling an individual to become more enquiring. Furthermore, when entrepreneurial behaviour is coupled with a desire to learn and innovate, described as market driving behaviour by Schindehutte et al. (2008), an EMO can develop. Hills et al. (2010) described EM as an orientation, it may also be described as an approach or style and subsequently, the STB owner-manager and their marketing orientation is a key part of EM research (Morrish 2011).

To summarise, the majority of small businesses and STBs have not been engaging with the opportunity digital marketing technology offers (Royle and Laing 2014; Alford and Page 2015; Ritchie and Brindley 2015) and the reasons for this need to be understood in order that STBs remain competitive as sustainable businesses. Because of the continuing digital revolution, STB owner-managers need to adapt to the way they digitally interact with customers and market their businesses. The owner-manager is the catalyst for change within the business (Gilmore 2001; Peltier et al. 2012) and plays a central role for developing digital competences and integrating digital marketing technology into existing marketing practices. An entrepreneurial marketing orientation in the STB owner-manager will be explored as a potential approach to facilitate the adoption and use of digital marketing technology in the small tourism business.

1.4 Aims and objectives of the study

This study identifies the STB owner-managers as the focus of the analysis because they control the adoption and use of digital marketing technology by the business (Simmons et al. 2008; Simmons et al. 2011; Peltier et al. 2012; Thompson et al.

2013; Alford and Page 2015) and their marketing orientation and attitude towards digital marketing technology are, therefore, important.

The overarching aim of this study is: -

> to provide empirical evidence on whether, and to what extent, the entrepreneurial marketing orientation and attitude towards digital marketing technology of the STB owner-manager influences the adoption and use of digital marketing technology

The aim of the research will be achieved by meeting the specific objectives that underpin the study: -

1. to critically evaluate the relevant small business marketing and digital technology literature, and the underpinnings of EM theory to identify the gaps in knowledge in relation to the challenges and lack of STB adoption and use of digital marketing technology to guide the setting of the research questions and hypotheses

2. to develop a conceptual framework to specify the variables in relation to the characteristics of an entrepreneurial marketing orientation and attitude towards digital marketing technology of the STB owner-manager, and the adoption and use of digital marketing technology and to derive, validate and refine a measurement scale refine a measurement scale for each of the EMO and AUDT variables

3. to identify the statistically significant relationships between the EMO, ADT and AUDT in order to estimate the influence of an EMO on the AUDT in STBs (at a first and second order construct level) with empirical evidence through original data collection from a sample of STBs and through robust analysis

4. to examine the mediating effect of the owner-manager's attitude towards digital marketing technology on the relationship between an EMO and AUDT in STBs (at a first and second order construct level)

1.5 Research methodology summary

A conceptual model, informed by the literature, was developed to guide the measurement of the relationships set out in the objectives. While EM theory has been the subject of analysis in previous work (for example, Jones and Rowley 2009), it has not been used as the basis for a framework to understand the level of influence of an EMO on digital marketing technology adoption in the STB sector or within a model that tests hypothesised relationships.

The exploratory research carried out in this study uses a quantitative design in order to objectively measure the constructs of EMO, ADT and AUDT and examine the significance of their respective relationships in English STBs. The research project was not designed to generate definitive findings, but to explore the complex nature of the relationships between the three constructs, that have many facets, and provide a basis for further research recommendations.

The lack of published scales to measure an EMO (Morrish et al. 2020) and the actual use of digital marketing technology in small businesses led to an investigation of the mainstream entrepreneurial, marketing and small business literature to provide the basis for the questions and statements used in the questionnaire survey design, enabling the development of a multivariate analysis model.

As the majority of STBs have the option to become members of destination management organisations (DMOs - formerly Tourist Boards), and to take advantage of a collective approach to develop a tourism destination, the DMO was the first point of contact and conduit to access the STBs. The endorsement of the DMO and their subsequent distribution of the online survey link, was designed to encourage participation in the research by the businesses, acknowledging they had

little time to spare. Suggested marketing communication text was sent to the DMOs for the initial survey distribution and for follow up messages.

The online questionnaire was initially trialled with participants of a Bournemouth University qualitative research project on digital transformation in STBs (Bournemouth University 2015). An online questionnaire was then created, and pilot tested with four DMOs, resulting in some amendments to the survey structure and the rephrasing of some questions and statements. Each questionnaire had a unique link to identify the DMO and participants were offered the opportunity to provide contact details so a summary of the published research could be forwarded to them.

As the research was exploratory in its nature, multivariate correlation analysis was chosen to investigate the strength of influence of a number of exogenous constructs (or external or independent variables – EMO and ADT) on a number of endogenous constructs (or internal or dependent variables - AUDT). The purpose of exploratory multivariate analysis is to identify data patterns or relationships when there is little or no prior knowledge relating to the relationships between variables (Hair et al. 2017).

The increasingly complicated types of questions posed in certain social science research disciplines have led to the development of second-generation multivariate statistical analysis methods. Partial least squares structural equation modelling (PLS-SEM) is a second-generation method of analysis and was used for this research as the main purpose was to understand the relationships between an EMO, ADT and AUDT. There are several advantages for using PLS-SEM as the analysis method for this research. Firstly, it enabled the identification of the key influences of an EMO on AUDT. Secondly it allowed both the formative and reflective measurement of constructs. Thirdly, it dealt with the complexity of the analysis model that contained many constructs and variables as well as the small sample size. Finally, it enabled latent variable scores to be used in subsequent analysis at a higher order level.

The constructs for EMO and AUDT were examined first, with each one evaluated for validity and reliability before the direct relationship between them was analysed and reported on. To see the separate effect of introducing ADT into the model, the second phase of the analysis introduced the four constructs representing ADT and again, they were evaluated for validity and reliability. The final stage of the modelling process involved creating composite scores for the constructs that remained in the model and transforming them to latent variables or indicators of the three main elements of the research, in order to evaluate the significance of the direct relationships between EMO, ADT and AUDT.

1.6 Thesis contributions

This research contributes to understanding the relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology in small tourism businesses as follows: -

1. The use of entrepreneurial marketing theory as the basis of a marketing-led, conceptual framework to assess the direct influence of an entrepreneurial marketing orientation on the adoption and use of digital marketing technology in small tourism businesses for the first time

2. The development of a measurement scale of entrepreneurial marketing orientation in relation to digital marketing technology adoption and use that may be adapted for other sectors

3. To provide empirical evidence of the relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology in small tourism businesses

4. To measure the significance of owner-manager attitude towards digital marketing technology as a mediator of the relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology in small tourism businesses

5. The identification of specific entrepreneurial marketing orientation characteristics that may lead to greater adoption and use of digital marketing technology in small tourism businesses

1.7 Structure of the thesis

Following this introduction, chapter 2 of the thesis examines the published research on small business and STB owner-managers and marketing, and specifically their adoption and use of digital marketing technology. It identifies the influences of the STB owner-manager on marketing and explores their attitude towards digital marketing technology. The marketing limitations of the small business and STB on the adoption and use of digital marketing technology are investigated followed by the barriers to adoption.

In chapter 3, the evolution of entrepreneurial marketing (EM) is examined as an effective management tool for an unpredictable, turbulent environment and is compared to traditional marketing practices. The evolution of marketing includes the recent advances in marketing theory at the entrepreneurial marketing interface and its potential approach to maximising the effectiveness of STBs through the use of digital marketing technology. EM theory provides the basis for an integrated marketing-led framework to measure the relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology for the first time.

Throughout chapters 2 and 3, a number of characteristics relating to the entrepreneurial marketing orientation and the attitude towards digital marketing technology of the STB owner-manager are developed. In chapter 4, these characteristics are identified as the variables for the conceptual framework along with elements of digital marketing technology adoption. The conceptual framework informs the research hypotheses by linking the established variables.

Chapter 5 outlines the methodology and methods used to answer the research aim and objectives. This chapter provides the philosophical approach, the research design, and the development of the structural and measurement models. Chapter 5

describes the rationale for the inclusion of each of the latent variables, it also describes and explains the development of the indicator variables for each of the constructs. In this chapter, the rationale for the chosen analysis method, PLS-SEM, is explained and a further section describes the refinement of the measurement scales, the development of the survey instrument, the administration of the survey and the specifics of the data screening procedures. This chapter also details the development of the analysis models for the PLS-SEM analysis.

Chapter 6 provides the results and findings of the multivariate analysis. Firstly, the direct relationships between the first order constructs of an EMO and AUDT are analysed. The second model explores the mediating effect of the first order constructs of an ADT on the direct relationships and in the final model, the relationships between the second order constructs - EMO, ADT and AUDT - are analysed.

The findings of the analysis are discussed in chapter 7 in respect of each of the models that were used in the analysis. The statistical significance of the direct and indirect relationships is discussed in turn and the models are compared at the first order and second level.

The thesis concludes in chapter 8 in terms of the contributions made, the new conceptualisations generated, the theoretical and practical implications of the research findings and how future research may be progressed.

CHAPTER 2

SMALL TOURISM BUSINESSES AND DIGITAL MARKETING TECHNOLOGY ADOPTION

2.1 Introduction

Digital technology has become an integral part of modern society and it has changed the way consumers engage with businesses (de Swan Aarons et al. 2014) through their use of digital applications such as the internet and social media on smart devices. The development of new digital marketing applications and tools is continual, as are the adoptive trends in digital technology capturing the imagination of today's digital consumers, resulting in new marketing challenges for the small tourism business (STB).

By adopting and using digital marketing technology, STBs can innovate their marketing practices (Harrigan et al. 2012a) and they can become sustainable, competitive businesses by responding to the possibilities that digital marketing presents (Barba-Sanchez et al. 2007). However, the adoption and use of digital marketing technology is not widespread in small businesses and the STB sector are generally characterised by low level of digitalisation (Royle and Laing 2014; Alford and Page 2015; Ritchie and Brindley 2015; Dredge et al. 2018). The reasons for low levels of adoption and use of digital marketing technology can be understood by considering the resource constraints of the STB and how the owner-manager approaches marketing.

By necessity, this chapter centres on the small business literature (including micro businesses) with two fields that are relevant to this research study – the specifics of small business marketing and that of their digital marketing technology adoption. A review of small and medium enterprise (SME) marketing literature identified two applicable streams of academic enquiry – the external and internal influences on the different style of marketing adopted by some small businesses and STBs (Bocconcelli et al. 2018). The literature concerning the adoption and use of digital

marketing technology in small businesses also concerns two relevant streams. The first stream provides reasons why STBs should adopt digital marketing technology due to the competitive advantage that it provides (e.g. Simmons et al. 2011; Peltier et al. 2012; Ransbotham and Kiron 2018). The second stream relates to the barriers that prevent them from doing so (e.g. Ritchie and Brindley 2005; Wymer and Regan 2005; Barba-Sanchez et al. 2007; Alford and Jones 2020).

To provide a comprehensive literature review on what is known about small business and STB marketing and digital marketing technology adoption, each of the following four marketing and digital marketing technology streams are discussed. First, the chapter discusses the importance of the small business sector in terms of its contribution to the United Kingdom (UK) economy and the unique characteristics of the STB are examined. Second, the external and internal influences on small business and STB marketing are investigated and in particular, the importance of digital marketing technology for the STB. Third, the influences on digital marketing adoption including the extant frameworks for adopting and implementing digital marketing technology are considered. This section includes the relevance of the role in marketing technology adoption played by the STB owner-manager by considering digital marketing technology as an innovation requiring behavioural change. A comparison is made of selected technology adoption models published within the small business marketing literature, followed by the outcomes of adoption for the STB. The penultimate section explores the barriers to adoption and the chapter closes with an overview and summary of the research gaps in the conclusion.

2.2 The small business and small tourism business context

2.2.1 The economic importance of small businesses to the UK

The significant number of small businesses that operate in the private sector leaves little doubt about their importance and their contribution to the world's economy (Wortley 2019). However, the actual contribution made by small businesses is not easy to quantify for two reasons. First, they are often combined with medium-sized enterprises when measuring their economic input (Bocconcelli et al. 2018).

Second, there is no consensus on the definition of small and medium enterprises (SMEs) – the definitions vary widely according to global region, country, policy makers and industry (Bocconcelli et al. 2018), making international comparisons problematic. The UK uses the European Commission (2003) classification of SMEs that includes micro enterprises as demonstrated in Table 2.1 and their definition is used to describe the businesses in this study.

Table 2.1: European Commission SME definition - employees and annual turnover

	Micro	**Small**	**Medium**
Employees	<10	<50	<250
Annual turnover	<€2m	<€10m	<€50m

European Commission (EC) 2003

A breakdown of the UK private sector SMEs (using the EC definition of size, employees and turnover) is given in Table 2.2. SMEs represent 99.9% of businesses, 60% of employment, 51% of value added and 11% of gross domestic product (ACCA, 2010).

Table 2.2: Private sector SME businesses in the UK

	Total in 000's	**% of total**	**Employees 000's**	**% of total**	**Turnover £ billions**	**% of total**
SMEs <250 employees	5,687	99.9%	16,147	60%	1,905	51%
Micro <10 employees	5,445	96%	8,790	33%	824	22%
Small <50 employees	208	4%	4,059	15%	540	14%
Medium <250 employees	34	1%	3,297	12%	541	14%

Rhodes 2019

According to Berryman (1983), small businesses tend to have one or two people who are responsible for the fundamental management decisions (finance, accounting, personnel, purchasing and selling) including marketing (Thomas 1998), usually the owner-manager. These individuals mainly operate without the aid of internal experts as they are responsible for running the business, but they may only have specific expertise in one or two business functions (Blankson and Stokes 2002). An owner-manager is defined as an individual who has a controlling interest in the business, is pivotal when making final decisions, and is involved in operating the business on a day-to-day basis (Spencer et al. 2012). Thus, owner-managers are important as they have the ultimate responsibility for the business and are differentiated from employed managers.

Whilst economic growth is by no means exclusively generated by SMEs, any incremental improvement in the small business sector will have a significant impact on a region and, ultimately, on a country. Conversely, if the small business sector fails to adapt to the changing digital environment and uncertain conditions, it is possible that the high failure rates of small businesses, including STBs, will continue (Shaw and Williams 2010). Consequently, STBs within the small business sector are a fruitful area for consistent academic enquiry to establish ways of encouraging their growth and improved performance by the adoption of digital marketing technology.

2.2.2 Small tourism business characteristics

There are varying classifications of tourism businesses (for example, Friel 1998; Jones et al. 2004; Thomas et al. 2011) distinguishing between service and non-service businesses and by geographic location (coastal, rural and city) as well as the business type. Tourism businesses are classified as providing the following services – accommodation; food and beverages; passenger travel; reservations and booking; recreation and cultural activities; and other consumption products (Office for National Statistics 2019). For the purposes of this study, STBs are defined as businesses that provide accommodation (hotels, bed and breakfast, guest houses, self-catering accommodation, camping and caravan sites, and holiday parks), hospitality (restaurants, cafes, tea rooms, public houses, inns and bars), visitor and cultural attractions, and tour operators (package holiday and trip organisers).

The UK tourism sector usually contributes £145.9bn (7.2%) of gross domestic product (GDP), employing 3.3m people in 241,000 businesses (Tourism Alliance 2019), approximately 4% of all UK businesses (Rhodes 2019). Excluding other tourism products, the services provided by tourism SMEs account for 60% of the total economic contribution of total tourism income with accommodation and food services alone generating £45.1 million in annual turnover (Department for Business, Energy and Industrial Strategy 2019b).

Many aspects of small business research may be applied to STBs. However, the tourism sector does have some unique characteristics. Lifestyle STBs often serve

local markets and can be based in rural locations and the owner-managers face different challenges from urban and suburban businesses (Jones et al. 2004) – for example, limited transport links can have a negative impact on staff recruitment as well as the customer experience. Seasonality adds to the challenge of staff recruitment (particularly in rural areas and outside peak season), in addition, staff are largely untrained and there is high turnover (Middleton 2009) as careers are not widespread in tourism (Hjalager 2002).

The seasonal fluctuation in demand faced by tourism businesses leads to the use of variable pricing tactics to maximise revenue during peak periods (summer and public holidays) and enabling costs to be covered in the off season when demand is lower (Friel 1998). Seasonality also reflects another key feature of the tourism product of perishability - the seat (travel, tour, café or restaurant for example) or bedroom accommodation can only be sold once at any one particular time and cannot be stored for sale in the future (Middleton 2009).

The challenge for any tourism business is to operate at full capacity for as long as possible and to stimulate demand (Callaghan et al. 1994). Digital marketing technology enables the STB to communicate promotions and make offers to stimulate demand and maximise capacity at relatively short notice (Travel Weekly 2012) by using intermediaries that provide online booking facilities. For some elements of the tourism sector, comparison sites such as trivago™ provide the customer with transparent pricing to ensure the customer books the facilities they require at the price they are willing to pay. Intermediaries such as Booking.com™ are available 24 hours a day, seven days a week, so the impact of customer responses to promotions and offers are immediately noticeable.

Whilst small firms may account for the majority of businesses in the tourism and hospitality industry, these businesses, as individual organisations, have limited reach in the scale and scope of their operations. STBs have relied on the attraction of their physical location for business and on the effectiveness of destination marketing (or management) organisations (DMOs) that can be national, regional or local organisations, for example Visit Britain, Visit Wiltshire, and Visit Blackpool (Ateljevic 2007). DMOs play a role in encouraging visitors to a country, region or

place. According to Friel (1998), the DMO often holds more sway in terms of attracting visitors to the location, collectively representing the STBs within its location, or the DMO may be the only source of marketing for the STB, but their support can vary in quality (Ateljevic 2007; McCamley and Gilmore 2017). Indeed, there may be limits to the support network according to government initiatives (or cutbacks) or opportunities provided by DMOs or tourism authorities (Ateljevic 2007; McCamley and Gilmore 2017).

These unique tourism characteristics result in an interdependent industry where the reliance amongst the various actors (tour operators, travel agents, transport services, accommodation providers and consumers) has been high in the past (Middleton 2009). Collaborative marketing initiatives are part of tourism business marketing, particularly at peak times, involving both DMOs and the individual businesses themselves (Friel 1998). However, adopting and using digital marketing technology provides the opportunity to place greater control in the hands of the individual STB owner-manager and to create collaborative partnerships of their choosing rather than those based on location.

STBs have always been faced with high customer contact levels (Middleton 2009). Now, there is a necessity for STBs to provide, at the very least, information online in some format to satisfy the needs of the tourism customer. One reason for this is demonstrated by the decline in the use of travel agency services as a result of UK customers being more demanding in their requirement for higher quality accommodation and more information on their chosen destination to ensure their expectations are met (Warnaby et al. 2008). Another reason is that up to 80% of UK domestic holiday makers are accessing information online to research promotions and offers for their travel and leisure options (Travel Weekly 2012) including higher quality accommodation providers and information on their chosen destination (Warnaby et al. 2008).

Tourism businesses provide intangible services that are inseparable from the product on offer so customers no longer simply need to be made aware of the services on offer, they need to know that the services available will meet their expectations (Coviello et al. 2006; Yildirim and Bititci 2006). The STB and the

customer create the inseparable service encounter together (although this is not exclusive to the tourism industry) and expectations may be based on previous communication as well as the experience on the day. The tourism customer can also influence future business by posting reviews on sites such as TripAdvisor™, and reviewer comments and recommendations are a crucial aspect for the service industry (Hudson et al. 2015).

Digital marketing technology has heightened customer expectations of better online experiences no matter the location. Customers expect the same quality of digital connectivity whilst they are on the move or in situ at their tourism or hospitality destination (Jackson and Ahuja 2016). The increasing customer usage of smart devices requires responsive content according to the device being used, to ensure the optimum customer experience. Using location-based applications, customers can generate immediate content online and provide reviews according to their experience at the time or afterwards.

From the early 1950s reservation systems, technology has been a vital part of the tourism infrastructure (Dhaigude et al. 2016), and now the consequential impact of digital marketing technology is arguably more considerable for the STB than other small businesses so the reasons for adoption and lack of adoption and use need to be understood. In order to understand how digital marketing technology can provide a competitive advantage for the STB, an appreciation of the unique characteristics of small business marketing is necessary. In the next section, the review of STB marketing is informed by the small and medium enterprise (SME) and tourism literature.

2.3 Small tourism business marketing

2.3.1 Small business marketing

Interest in the study of marketing within the context of small businesses gained significant momentum around 40 years ago in the 1980s (Bocconcelli et al. 2018). Over those years, authors have acknowledged that marketing in various forms is recognised as an important element in small businesses achieving a competitive

advantage (for example, Brooksbank et al. 2003; Elliott and Boshoff 2007; O'Dwyer at al. 2009a; Eid and El-Gohary 2013; O'Dwyer and Gilmore 2013; Thompson et al. 2013). Similarly, some studies have also demonstrated an awareness of the positive relationship between marketing practices and small business performance (for example Coviello et al. 2006; Gilmore 2011; Morrish et al. 2020).

Measuring performance in the small business requires consideration of what success means. Traditional measures of success are often expressed financially in turnover and profit figures (Komppula and Reijoinen 2006). However, they are not the only measures for small businesses whose contribution may also be manifested in job and wealth creation through business start-up, survival and growth (Komppula and Reijoinen 2006). Achieving clearly defined and measurable objectives reflects success but marketing goals may be subjective as well as financial, particularly in the tourism sector (Komppula and Reijoinen 2006) – for example gaining access to new markets and customers. Small businesses prosper in the long-term by adapting to changes in the needs of their customers through flexibility and adaptability according to Thompson et al. (2013). However, some small businesses and STBs are satisfied with survival or simply maintaining the status quo, often the case with lifestyle tourism businesses, such as rural bed and breakfast providers (Thompson et al. 2013).

There are studies indicating that some small businesses have problems with marketing and, as a result, it is not prioritised as a business process and is considered a large firm activity (Blankson and Stokes 2002). Harris and Watkins's (1998) study of small hotels found several factors that prevented the development of a marketing focus or orientation (understanding market trends and customer needs). These include: "an unclear view of the customer, contentment with the status quo, ignorance of market orientation, lack of competitive differentiation, limited resources, perceived inappropriateness and short-termism" (Blankson and Stokes 2002, p.49). The result has been general and/or inappropriate marketing activity that lacks significant impact on performance, which has a negative impact upon any future marketing investment (Blankson and Stokes 2002). Furthermore, the fact that SMEs have the proven capability to sell without planned marketing

activity (Carson 1990; Stokes 2000) may exacerbate the requirement for a marketing strategy.

There are also many studies confirming the unique characteristics that differentiate marketing in small (and medium) businesses from conventional marketing in larger organisations (e.g. Carson 1990). The difference is largely due to the constraints they are under – for example uncertainty and limited resources, (Blankson and Stokes 2002; Fillis and Wagner 2005; Quinton and Harridge-March 2006; O'Dwyer et al. 2009b; O'Dwyer and Gilmore 2013; Bocconcelli at al. 2018). As a result of these constraints, SMEs tend not to have formal strategic and marketing plans and their marketing does not adhere to the principles of traditional marketing as often practiced by larger businesses (Blankson and Stokes, 2002; Gilmore et al. 2001).

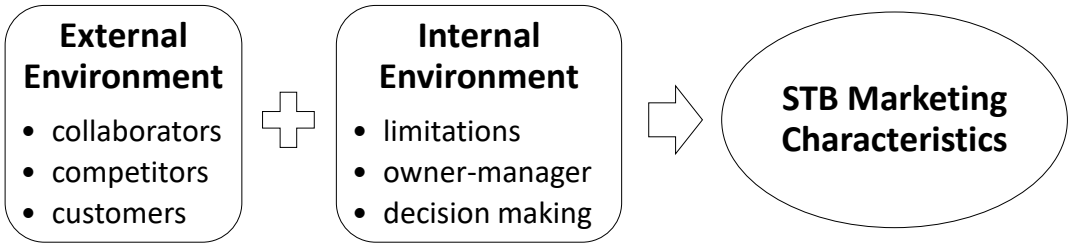
The stage of a company's lifecycle is also relevant to marketing in small businesses (Carson 1985; O'Dwyer and Gilmore 2013) as a more integrated and proactive marketing approach is thought to evolve as the business progresses through growth stages (Carson 1985). The evolved marketing approach is often attributed to the characteristics; behaviour and style of the owner-manager and there is an expectation that certain responsibilities of the owner-managers such as marketing are delegated or devolved as the business grows (Lam and Harker 2015).

O'Dwyer and Gilmore (2013) identified the characteristics of marketing in SMEs as decision making; customers; limitations; environment; and competitors. These can be adapted further and considered from an external and internal perspective of the STB operating environment. The external environment is extended to include business collaborators and internally it includes the owner-manager and their decision making (Gilmore et al. 2001; O'Dwyer et al. 2009a) – Figure 2.1.

The external and internal environments shape STB marketing. As the business develops and grows, marketing approaches can respond to the operating environment, market demands and competitor activity, reflecting the need for new products or changing customer needs (Carson 1985; O'Dwyer and Gilmore 2013;

Bocconcelli et al. 2018). Other than through the influence of the owner-manager, the internal environment reflects the limitations of the business resulting from its size and limited resources.

Figure 2.1: Characteristics of small tourism business marketing



Adapted from O'Dwyer and Gilmore 2013

The external and internal environment marketing influences are now examined including the relevance of the changing needs of the tourism customer.

2.3.2 External marketing influences

An important aspect of marketing in STBs is the collaboration that has come about through necessary associations with digital intermediaries (e.g. Booking.com™ and DMOs with a web presence). These businesses facilitate online booking, providing STBs with a digital presence, with the bookings generated by intermediaries paid for by commission. Online tourism partners also offer tier-based membership fees where higher paying businesses receive more services and are prioritised e.g. Visit Wiltshire Gold and Silver online membership benefits. There are disadvantages however, in addition to the financial cost to the STB, the intermediaries also distance the STB from customer search data, for example at the booking stage the intermediary collects customer information at the point of contact.

In tourism, a collaborative business network can be used as a resource for co-ordinating activities for mutual benefit in order to share resources and information (Coviello et al. 2006). The business network, formal or informal, helps the marketing of the STBs by providing customer and market information, and insight that may lead to incremental improvements or innovations in services and

processes and a competitive advantage (O'Dwyer and Gilmore, 2013). By using digital marketing technology, the business network may be extended as it provides access to a wider variety of information services and quality advice (Thompson et al. 2013). Through the transfer of knowledge, confidence and enthusiasm from the business network, uncertainties and risks may be ameliorated resulting in more successful digital marketing technology adoption in the STB (Ritchie and Brindley 2005).

Remaining competitive is essential for the sustainability of STBs and they can achieve a competitive advantage through added value marketing initiatives (Grant et al. 2001). The ability to create value comes from knowing and understanding the market, both customers and competitors, and continued knowledge development (O'Dwyer and Gilmore 2013), which are all critical to competitiveness (Shaw and Williams 2010). The flow of information from the business network can also provide the basis of a competitive advantage through differentiation. However, being different to competitors is not necessarily related to business success but is related to a strong customer focus (O'Dwyer et al. 2009a). Digital marketing technology does not automatically provide a competitive advantage (Thompson et al. 2013). However, there is evidence that the adoption and successful implementation of digital marketing technology helps create sustainable competitive advantages (for example, Barba-Sanchez et al. 2007; Peltier et al. 2012; Barnard et al. 2017; Ransbotham and Kiron 2018). The advantage comes from enhanced business operations and the ability to adapt to rapidly changing markets and the opportunities they offer for leveraging resources in the practice of customer-centric marketing (Peltier et al. 2012).

Competitor marketing activity is outside the control of any business. However, marketing in STBs can be reactive to competitors in several ways (Carson et al. 1995; O'Dwyer et al. 2009a). STBs can use adaptive marketing strategies to differentiate themselves from their competitors' activities (O'Dwyer et al. 2009a). In a dynamic, competitive environment, digital marketing technology allows adaptability and flexibility and above all, a prompt response. When competitors adopt specific digital marketing technologies, pressure can be exerted to encourage similar methods in STBs so that they remain competitive (Wymer and Regan

2005). Despite the difficulties in benchmarking competitor marketing activity (Chaffey 2012), awareness of their marketing activities can result in following the lead of another business (O'Dwyer et al. 2009b). Indeed, collaborating with competitors in tourism businesses has been found to be beneficial (Gilmore 2011), especially in rural tourism settings (Komppula 2014) when demand is high and capacity is reached – this is done by recommending competitors and consequently, income is retained within the locality.

From a traditional marketing perspective, knowledge of customer needs and wants is essential for survival in all businesses. STBs have the opportunity to offer superior customer service and customisation through their close contact with regular and repeat customers and, consequently, they can develop distinctive services and niche products (Friel 1998). In the past, maintaining personal customer relationships in many STBs has been possible due to limited customer numbers. Personal communication can be informal and open, often face-to-face (Ritchie and Brindley, 2005; Gilmore et al., 2007), with the ultimate objective of creating value (Gilmore et al. 2007). As the business grows and customer numbers increase, the use of digital marketing technology communication applications like websites and social media provide the opportunities to create personal relationships and customer loyalty (Simmons et al. 2011).

Maintaining a level of communication with customers enables small businesses to meet their customers' needs efficiently and effectively (Harrigan et al. 2012b) – this comes from the ability to obtain and manage information, which is invaluable in marketing decision making. However, customer information is not always systematically recorded in STBs and sometimes happens because of everyday activities and interactions with their customers (Friel 1998). Systems such as customer databases or records are often held in rudimentary formats and are unconnected in STBs (Ateljevic 2007). This form of elementary record-keeping in STBs makes it difficult to analyse and use customer information to create value and develop new, innovative customer experiences (Ateljevic 2007). One example of an area that develops customer led innovation and value creation is through the timely, iterative customer feedback process (Sullivan Mort et al. 2012) but this

feedback needs to be recorded, collated, assessed and then effectively used to benefit the STB.

In today's digital world, the responsibility of the marketing function is still to create and sustain enduring relationships with customers, which can be achieved by recognising that the customer always has the opportunity to be 'switched on' with virtually constant access to information and, has changing demands and expectations. The digital era has given rise to what is being called 'the connected customer' (Leavy 2019) and the focus has changed from pushing messages at customers to one of engaging with them. Most of today's tourism customers are connected by digital technology to meet their leisure needs. The connected customer is empowered, has choice, and is in control – the empowered customer, is one who no longer relies solely on communication from the company, they are informed through other consumer networks that provide alternative information, perspectives and recommendations (Prahalad and Ramaswamy 2004; Quinton and Simkin 2017; Vatash 2018).

Customers are gaining power and control over the way their information is distributed, shared and used online, and the focus of online tourism lies in customer-centred technologies enabling dynamic interaction with customers (Buhalis and Law, 2008). Customers now have an expectation of seamless delivery of digital content according to the device being used (Deloitte 2013a) and the use of web based searches provides a reason for the business to optimise the presence they have on the search engines that are most used (Deloitte 2013a). Indeed, after the STB and the customer create the experience, sites such as TripAdvisor™ place a lot of power in the customer's hands through the opportunity to post reviews, opinions and recommendations of the experience.

From the interaction of customers on digital platforms, greater knowledge of customers can improve the service offering by the STB and can lead to innovation, seen as the main determinant of competitive advantage (Thompson et al. 2013). The onus is on the business to respond to the connected customer in a number of ways that may be enabled by digital marketing technology (Quinton and Simkin 2017; Vatash 2018). Faster discovery of, and adaptation to, customer needs can be

assisted by digital marketing technology, and faster communication with customers will lead to better service quality and increased customer satisfaction (Eid and El-Gohary 2013). It is still customer relationship management but the emphasis in today's world is on immediacy and that can only occur when processes are in place to support and complement marketing activities. The traditional trade-off between communication reach and richness is eliminated, and, as a result, digital marketing communication is improved in terms of immediacy, relevance and currency (Harrigan et al. 2012b), and transaction costs are reduced (Thompson et al. 2013).

Digital marketing technology automatically generates and records customer data but it is the analysis, interpretation and use of data that provides insight for the owner-manager – the key to understanding what their customers do and why they are doing it, making the business more competitive. According to Harrigan et al. (2012b), small businesses tend not to use customer information to determine profitability, indicating a need to improve the sophistication of their processes. The dilemma that STBs have in relation to remaining competitive is to decide where and when to make new digital marketing technology investments (Harrigan et al. 2012b). This takes time, and the STB must maintain their focus on the customer-oriented processes, inherent in their day to day operations and what constitutes their unique advantage over larger businesses (Harrigan et al. 2012b). Customer data can be more accessible and easily managed through digital technology, but owner-managers struggle to generate insight from that data and to integrate it into existing management practice (Chaffey and Patron 2012; Harrigan et al. 2012b; Royle and Laing 2014).

2.3.3 Internal marketing influences

Marketing is considered as a cost to businesses that are often controlled by their finances and have limited cash flow, although marketing is also recognised as an investment (Kumar 2015). The cost versus investment view may explain why there is a lack of consistency in STB marketing which varies from formal marketing planning, to tacit and incremental marketing (Jones et al. 2004). Limitations in small business and STB size often impact marketing primarily from a resource perspective (Bengtsson et al. 2007) with operational constraints from a lack of

finance, time and expertise (Taiminen and Karjaluoto 2015) and the opportunity to buy in expertise is often beyond the reach of many (O'Dwyer and Gilmore 2013). These limitations have the potential to create both negative and positive impacts.

From a negative perspective, marketing is not always a priority and has been described as incidental as small firms operate without employing traditional marketing practices such as planning, formal market research, and a structured long-term approach (O'Dwyer and Gilmore 2013). According to Ateljevic (2007), formal planning is often too rigid for the dynamic nature of operating an STB and there is evidence of a lack of formal business goals that leads to underperformance (Getz and Carlsen 2000), informal decision making and arbitrary development of the business (Getz and Carlsen 2005). Digital marketing technology can complement what Gilmore et al. (2001) described as unstructured, spontaneous and reactive approaches to marketing in small businesses due to its immediacy, flexibility and ability to reach intended targets quickly and accurately (Jones et al. 2014; Alford and Jones 2020).

From a positive perspective, these limitations can encourage a culture of innovative, creative and informal solutions to marketing challenges and problems (O'Dwyer et al. 2009a). Small businesses are often characterised by an eagerness to develop new operating methods, innovative business models and distinctive marketing strategies faster than larger, rival enterprises, in order to gain a competitive advantage (Hagemann Snabe 2012). Innovative marketing provides the opportunity to capitalise on changes in the market and changes in customer requirements by redefining the product or service on offer (O'Dwyer et al. 2009a). If innovative marketing occurs, it usually emanates from the highly personalised management style of the owner-manager (Carson 1985; O'Dwyer and Gilmore 2013).

As referenced earlier, the owner-manager can be key to the success or failure of any business, particularly in micro and small businesses Their business and personal goals, motivation, management style, competences and ability to develop and learn, all play a part in how the business progresses (O'Dwyer and Gilmore 2013). Decision making is less bureaucratic in small businesses without layers of

management and is often made in isolation by the owner-manager in response to dynamic environments (Murray et al. 2002). The decisions reflect the characteristics, behaviour and way of managing the business by the owner-manager, influencing overall performance (O'Dwyer and Gilmore 2013). The motivation for driving the business by the owner-manager may come from lifestyle goals, building a family legacy or an entrepreneurial orientation (Ateljevic and Doorne 2000; Hodson and Whitelock 2003: Fillis and Wagner 2005). Getz and Carlsen (2005) identified motivation, lifestyle and autonomy as significant influences on the STB owner-manager. The motivation behind starting a business is an influence, for example wanting to live in a tourist location, providing employment for family members or supplementing retirement income (Getz and Petersen 2005). These can in turn affect the scope and scale of the business by influencing the owner-manager's goals and objectives and potentially limiting growth and profit maximisation (Getz and Carlsen 2005).

Due to the size of the business, most small businesses do not have a marketing specialist: the owner-manager needs to become the expert (Carson 1985). STB owner-managers tend to be generalists as opposed to specialists and are often concerned with the operational management of day-to-day activities rather than the strategic aspects and long-term success of the business (Ateljevic 2007). Owner-managers of STBs tend to work long hours, lack free time and often have difficulty balancing work and family life (Getz and Carlsen 2000). Marketing is juggled with other business functions (administration, personnel and finance management) and is given low priority in comparison to other day-to-day priorities (Blankson and Stokes 2002; Hjalager 2002). Many small business owners have a problem with marketing, often regarding it as a larger business function (Stokes and Blackburn 1999). Despite being aware of the term 'marketing', owner-managers will often associate marketing with selling or promotion and not with the strategic thinking that is required for effective marketing (Quinton and Harridge-March 2006).

Lack of appropriate marketing competences may also affect the progress of the business, as a competitive advantage is gained through the exploitation of skills, personal networks and creative use of limited resources (Fillis and Wagner 2005; Quinton and Harridge-March 2006). Marketing in particular helps to create a

competitive advantage by the effective use of knowledge, continually developed with experience and gained over time (Grant et al. 2001). The effective use of marketing communication from customer and market knowledge provides value for the customer and an incentive to remain loyal to the business and in STBs, customer loyalty is represented by repeat visits or recommending the business to others. Marketing competences, judgement, opportunity recognition, innovation and creativity are the skills that the STB owner-manager needs to progress their business. Consequently, any assistance to make marketing more effective for the time-pressured owner-manager should present a welcome opportunity. However, the ability to take advantage of the opportunity that digital technology provides for marketing requires a certain mindset as marketing in the digital era is less about the actual technology and more about what digital technology enables (Hoffman and Novak 2011; Vatash 2018).

In summary, marketing does exist in small businesses in some form, albeit in an unconventional way, that is sometimes described as unique to small businesses (Blankson and Stokes 2002; O'Dwyer and Gilmore 2013). The owner-manager is a key element of small business marketing; how they do business, how they make decisions, how they respond to current situations; coupled with their skills, personal and business objectives all combine in the small business and STB marketing approach (Gilmore et al. 2001; Gilmore et al. 2013).

2.4 Digital marketing technology adoption

2.4.1 Digital marketing technology adoption frameworks

The impact of the digital revolution can be summarised from a marketing viewpoint in terms of the technology itself moving from analogue to digital (not part of this study), adopting and using new technology (by businesses, people and customers), and the dissemination of digital information that can build knowledge of customers and markets (Jackson and Ahuja 2014). As with small business marketing, there are external and internal influences that become apparent when examining a selection of existing frameworks that help to explain digital marketing technology adoption. In this section, these frameworks for the adoption and use of

digital marketing technology are reviewed from the perspective of the owner-manager as the key decision maker.

2.4.1.1 Innovation – the diffusion and adoption of digital technology

The theory of the diffusion and adoption of innovation is one way of understanding digital technology adoption as it helps to explain human behavioural change (Tarde and Parsons 1903). Rogers (2003) applied this theory to marketing by setting out the process of an individual's sequential cognitive stages that result in adoption or rejection or postponement of an innovation.

The sequence of stages through which knowledge of an innovation extends to individuals is diffusion (Rogers 2003) and involves the social processes of communication within a society (Loudon and Della Bitta 1993). Diffusion refers to how the knowledge about the innovation spreads to a wider population (Loudon and Della Bitta 1993) in a personal or business context. Recognition of a need for innovation may come from customers (through their engagement with the business), benchmarking competitors, collaborative partners or any combination of these influences. Adoption is another stage process between individual awareness and confirmation manifested in behaviour – the cognitive process of consideration and action - why the individual makes the decisions that they do (Loudon and Della Bitta 1993).

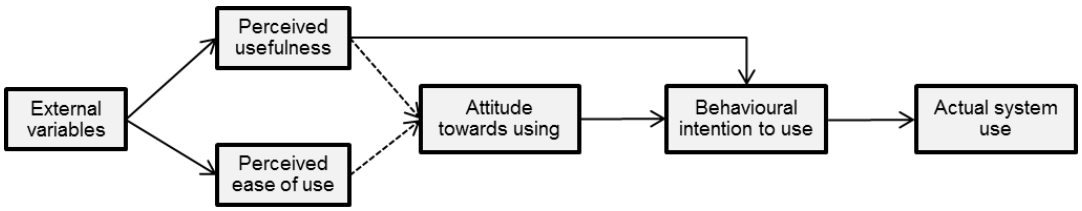
The innovation decision process occurs in stages according to Rogers (2003) and he identified five steps shown in Figure 2.2. The process may be viewed as a way of learning in order to reduce risk and uncertainty (Rogers 2003) where some basic level of understanding of the innovation comes from awareness and knowledge in the first stage. The second stage reflects the attitude development of the individual that can be externally influenced and re-enforced by personal contacts (Rogers and Beal 1958). Next comes the decision to try, adopt or reject the innovation. Adoption occurs if the decision is favourable and there are sufficient resources available. The confirmation stage occurs when the innovation becomes part of everyday practice.

Figure 2.2: The innovation decision process

(Rogers 2003)

The process of acquiring knowledge, applying that knowledge, and making the decision to adopt or try the innovation is subject to many internal and external factors and will be influenced by the STB owner-manager's relationship with digital marketing technology. A specific explanation of the diffusion and adoption of digital technology is that of the technology acceptance model (TAM) by Davis et al. (1989), as shown in Figure 2.3.

Figure 2.3: The technology acceptance model



(Davis et al. 1989)

In this model, the relationship with digital technology and its acceptance concerns two external variables, attitude and behaviour. External variables lead to awareness and the key to acceptance lies in the usefulness and ease of use of the digital technology (Davis et al. 1989). An example of an external variable in the model are the types of digital technology involved (Schepers and Wetzels 2007) and adoption may be influenced by its use by the customers of the business. Availability of resources, time, money, and any necessary third parties are also external influencers (Ajzen 1991), subsequently, despite the intention of the owner-manager, the lack of opportunity to adopt digital technology may prevent some businesses from doing so.

Venkatesh et al. (2003) proposed an extension to the technology acceptance model, TAM2, by exploring the behavioural intention element. They suggested that adopting technology is also influenced by performance expectancy and effort expectancy on behalf of the individual and social influence facilitates its use

(Venkatesh et al. 2003). Behavioural intention and specifically, the theory of planned behaviour (Ajzen 1991) considers the influence of attitudes, social norms and perceived behavioural control on behavioural intention. The social norms that influence decision making being experience, perceived probabilities and consequences of success or failure of technology adoption (Ho et al. 2017). For this reason, attitude towards digital marketing technology is an important element of the owner-manager's decision to adopt and is discussed next.

2.4.1.2 Owner-manager attitude towards change and innovation

Integrating digital marketing technology into any business will result in change – change within the business and behavioural change by those whose roles are affected by the digital marketing technology. A behavioural change towards technology integration in an STB requires a move away from the 'bolt-on' and piecemeal digital marketing approach employed by many small firms (Adobe 2014; Royle and Laing 2014). However, there is a prior stage to that of actual digital marketing technology adoption. That prior stage relates to developing an openness to change and innovation - an acceptance of change (Wanberg and Banas 2000), or at least a recognition that change is required, within the mind of the STB owner-manager. The attitudes and beliefs of the STB owner-manager will influence their acceptance of change through feelings as to whether they believe it is necessary or not.

Fishbein and Ajzen (1975) distinguished between an individual's beliefs and attitudes – where belief constitutes the information that is known about an object and attitudes represent the positive or negative evaluation of it. Fishbein (1967) put forward three components of attitude – cognitive, affective, and conative (CAC). The CAC model examines awareness, attitudes and perception that result in certain action or behaviour (Table 2.3.)

Table 2.3: Cognition, affect and conation descriptions

Element	Description
Cognition	Awareness, knowledge, comprehension, application, analysis, synthesis
Affect	Value, preference, conviction, feelings, emotions, attitudes, evaluation
Conation	Action, intention, reason, discovery, transition, transformation, choice

(Adapted from Fishbein 1967)

Knowledge and perceptions acquired through direct experience (and other sources) shape a person's cognition. In other words, what they think about technology, whether they see it as a necessity, a challenge or an opportunity. The second element of the model is affect – how they feel about it, what emotions it generates, their preferences in relation to it and the value they place upon it in comparison to alternatives. The third and final element is conation. Conation refers to the likelihood of, or tendency towards, undertaking specific actions and behaviours, making a conscious choice relating to adopting and using digital marketing technology.

In order to assess the value of the technology, the individual must be aware of it by obtaining knowledge and experience either directly or indirectly (Simmons et al. 2008). Attitude towards digital marketing technology involves the individual weighing up the advantages of successful adoption being greater than the disadvantage of failure, the belief that any adoption will be successful, and the opinions of respected others (from the business or personal network) – i.e. consensus that the individual should adopt the digital marketing technology (Ajzen 1991). It is the opinion of others that helps the individual to evaluate and develop trust in technology (Gefen et al. 2003; Ho et al. 2017). The motivational factors that influence behaviour encapsulate intention, which in turn predicts the effort that an individual will expend when engaging in certain behaviour. There are additional factors such as the degree of perceived control that must also be considered – a self-assessed ability to perform an action as well as the availability to be able to do it (Mathieson 1991) and the perceived risk of the behaviour (Venkatesh and Goyal 2010).

The STB owner-manager will ultimately decide the strategy that is deemed appropriate for the business, but it is understanding that choice that may lead to changing behaviour and adopting or not adopting digital marketing technology. By identifying what STB owner-managers know (cognition) and how they feel about technology (affectation), this determines how their behaviour (conation) may be influenced when adopting digital marketing technology. Chaffey (2011) identified three types of technology adoption behaviour: cautious – holding off until the benefits are proven; risk-taking – 'giving it a go'; and considered – evaluate and

then decide. Each presents their own disadvantages; both the cautious and considered approaches may result in 'missing the boat' and being too late in adoption due to the speed of digital technology development. With the risk-taking approach, benefits may not be forthcoming due to lack of consideration and may result in financial loss.

The owner-manager, as the catalyst for change within the business, plays a central role for developing digital competences and integrating digital marketing technology into existing marketing practices (Gilmore 2001; Peltier et al. 2012). The entrepreneurial owner-manager must demonstrate proactive, opportunity-led characteristics, be innovative and open to change (Fillis and Wagner 2005) in order to compete in the digital era. Whether such a change will come about depends on the response of the STB owner-manager, their decision making and the use of limited resources, which are discussed next.

2.4.1.3 Small business digital marketing technology adoption

Market opportunities and competitive pressures as external influences provide a rationale for STBs to adopt digital marketing technology (Jones et al. 2003; Wymer and Reagan 2005; Simmons et al. 2008; Simmons et al. 2011; Alford and Page 2015). As a result of competitive pressure from digital disruptors such as Airbnb™, it may be necessary for the STB to seek new customers and digital marketing technology provides STBs with the opportunity to explore and expand into new markets through an online presence.

Other external factors may have an adverse effect on the adoption and use of digital marketing technology in some STBs by limiting the choice of the owner-manager include digital infrastructure and reliability, and governmental support or lack of it (Wymer and Regan 2005; Jones et al. 2014). Indeed, according to Dredge et al. (2018, p.16) 'regulatory frameworks, policy approaches towards economic development, innovation and entrepreneurship, labour policies, and even social welfare models can act to either support or slow down the progress towards digitalisation'. Neither recent Labour or Conservative governments have had digital at the heart of their administrations and digital policy co-ordination has

been inconsistent due to split departments and split ministerial responsibility (Glick 2017).

Previous policy efforts to increase use of digital technology have prioritised the general understanding of it and mainly focused on changing perceptions and increasing skills by promoting best practice, highlighting case studies of successful use, and emphasising training as opposed to the understanding of SME's actual practices with digital technology (Morgan-Thomas 2016). Consequently, the lack of context-specific advice has led to the effectiveness of these approaches being questioned and small businesses have discounted the value of this type of support (Morgan-Thomas 2016) and the 'one size fits all' approach (Alford and Jones 2020). Therefore, adopting and using digital marketing technology is a key concern for STB owner-managers and policy makers (Jones et al., 2013; Simmons et al. 2008) as STB owner-managers require detailed explanations of the principles and benefits of digital marketing technology, specific to their business (Mazzarol 2015; Department for Business, Energy and Industrial Strategy 2019a).

Another external influence on adoption is the business network and collaborative and cooperative behaviours (Jones et al. 2003; Wymer and Regan 2005; Simmons et al. 2008; Simmons et al. 2011) – key characteristics of the tourism industry. STBs are frequently limited in terms of skills, knowledge, finances, resources and time and, consequently, they require support to survive and thrive in an unpredictable, changing environment (Ioniţă 2012). Hallin and Marnburg (2008) found that assistance is required to help the owner-manager to identify knowledge gaps and understand which new knowledge to acquire. This assistance may come from resources in the form of networks and collaboration – a critical factor for successful, sustainable growth for both businesses and destinations (Jones et al. 2004; Shaw and Williams 2010; Komppula 2014; Foroudi et al. 2017; Roper and Bourke 2018) and one that can be improved by digital marketing technology.

A decade ago, Chaffey (2010) acknowledged the paucity of frameworks to assess and plan digital media investment. Despite information communication technology being a common research area, there are few published studies investigating adoption and use of digital marketing technology in STBs (Thomas et al. 2011). To

understand the adoption and use of digital marketing technology in STBs, six frameworks for digital marketing technology adoption, proposed in the small business literature, are considered and summarised in Table 2.4.

Table 2.4: Digital technology influences and website adoption in small businesses

External	Internal	Owner-Manager	Outcome	Author
Market opportunities, need created, co-operative behaviours	Customer knowledge, business model development, value chain reconfiguration	Perceived benefit for the firm, motivation; change agent, market orientation	Web based value and competitive advantage	Jones et al. 2003
Competitor pressure, government, reliability, cost, market, partners	Innovativeness, business models, priority, security, capital, cost	Prior experience, Value to the business	Website adoption	Wymer and Regan 2005
Industry, culture, norms, network, business partners, competition, government	Size, lifecycle stage, online objectives, purpose and value proposition, targeted customers	Marketing ability, entrepreneurial characteristics, knowledge and experience, perception of benefits, costs and barriers	Website adoption	Simmons et al. 2008; Simmons et al. 2011
Market uncertainty, environment hostility, switching costs	Relative advantage, number of employees, revenue, size	Knowledge, risk orientation, attitude towards change, age, education level, technology perception	Customer relationship management/ enterprise resource planning adoption	Peltier et al. 2009; Peltier et al. 2012
Customer relationships, fast broadband access, advice and support	Available resources, business model fit, online and offline goals	Knowledge, skills, technology disposition, perceptions of value	Strategic response planning framework adoption	Jones at al. 2014
Market, customers and user generated content	Gaining customer insight, using analytics, customer database	Focus on customer acquisition and retention, testing and learning	Refined digital marketing goals	Alford and Page 2015

Adapted from Jones et al. 2003; Wymer and Regan 2005; Simmons et al. 2008, 2011; Peltier et al. 2009, 2012; Jones at al. 2014; Alford and Page 2015

An externally created need for technology adoption in STBs could occur from the use of certain technologies by the tourism customer, for example online booking (Jones et al. 2003; Wymer and Regan 2005). Williams and Shaw (2011) also identified the customer and their use of digital technology, as a driver of innovation within tourism businesses as customers are sources of knowledge for

the STB owner-manager and digital marketing technology provides a way of harvesting, analysing and applying this knowledge for innovation (Williams and Shaw 2011).

Long-term business success comes from the ability to adapt to changes in customer's needs by being flexible and efficient (Thompson et al. 2013). Jones et al. (2003) and Alford and Page (2015) identified a market and customer orientation as a component of digital technology adoption (Jones et al. 2003). The frameworks proposed by Jones at al. (2003) and Peltier et al. (2009; 2012) acknowledge the owner-manager's attitude towards change and their role as a change agent within the business. Becoming more innovative is a challenge to some owner-managers due to their limited resources and skill gaps. Many small business owner-managers tend to be less specialised when it comes to marketing and digital technology (Jones et al. 2013). Entrepreneurial characteristics including innovativeness, were found to be an influence on digital technology adoption by Wymer and Regan (2005) and Simmons et al. (2008; 2011). However, other studies have found that digital marketing technology-based innovation in small businesses is limited to the available skills and motivation of the owner-manager (Fillis and Wagner 2005; Quinton and Harridge-March 2006; Elliott and Boshoff 2007; Peltier et al. 2012). It is worth noting that not all small businesses want to innovate as returns are not guaranteed, and, risk averse STB owner-managers are likely to be less innovative and, any innovations they adopt will be low in number, minor or incremental (Thompson et al. 2013).

A further factor, resulting from the lack of resources is the impact on the owner-manager's confidence and motivation regarding adoption and use of digital marketing technology (Jones et al. 2003; Jones et al. 2014) and subsequently their attitude towards it (Wolcott et al. 2008). There is some evidence from Hjalager's (2002) research that STBs tend to follow innovation only after they have assured themselves that the investments or changes are feasible. This is unsurprising given their lack of resources and alludes to their risk orientation as an influencer of digital marketing technology adoption (Peltier et al.2009; Peltier et al. 2012).

Once again, there are the potential positive influences of innovativeness from creative use of limited or external resources (Wymer and Regan 2005) and the possible negative outcomes from lacking in digital skills and expertise (Jones et al. 2014). The dynamics of the digital world constantly require new skills and capabilities to be developed in order to keep up with change driven by customers and to take advantage of the opportunities digital marketing technology provides through a learning orientation (Alford and Page 2015). Skills and expertise in digital marketing come from knowledge and experience and these traits can be linked to the STB owner-manager when considering their individual attitude towards digital marketing technology (Wymer and Regan 2005; Simmons et al. 2008; 2011). If these skills are lacking, it is difficult for the STB owner-manager to adequately make an accurate assessment and appraisal of the digital marketing technology required for their business (Wolcott et al. 2008).

The perceived value of digital marketing technology and the benefits it provides the business are significant factors included in five of the six frameworks in Table 2.4 (Jones et al. 2003; Wymer and Regan 2005; Simmons et al. 2008; 2011; Peltier et al. 2009; 2012; Jones et al. 2014). There is also empirical evidence from Taylor and Todd's (1995) research that the usefulness of the digital technology under consideration influenced attitude and consequently the intention to adopt. In addition to usefulness, Venkatesh et al. (2003) also found that age, gender, and experience affected the degree to which effort expectancy, performance expectancy, and social influence affected the individual's intention to adopt technology.

2.4.2 The outcomes of digital marketing technology in small tourism businesses

All businesses face the challenge of operating in today's dynamic environment - coined as the third industrial revolution (Economist 2012). Digital technology is a force within that environment. For STBs to be sustainable, maintain growth, and contribute to economic development there is a compelling case to adopt and use digital marketing technology (Wolcott et al. 2008; Tan et al. 2010; Leeflang et al. 2014; Alford and Page 2015; Foroudi et al. 2017; Roper and Bourke 2018).

STBs can use online channels to enhance their service offering by regularly updating and changing content – digital marketing technology enables immediacy for promotional impact and variable pricing to drive sales. Most STBs use variable pricing (Friel 1998) as they are often defined by seasonality and the requirement to cover off-peak costs during the summer season and periods of high demand over public holidays. Digital marketing technology allows pricing transparency and easily adjusted prices that can reflect consumer demand or periods of promotion to generate demand in the off-season.

Digital marketing can increase the reach of STBs to new customers and international markets cost effectively as it is not limited to geography and time. However, that presents greater challenges of generating awareness and making the voice of the small business heard (Chaffey and Ellis Chadwick 2012). Many digital marketing applications offer basic versions free of charge, for example social media accounts, Google Analytics™ and WordPress™ for basic websites, giving the STB the opportunity to create digital communication channels.

As the influence of customers grows through creating and sharing online content, the challenge of capturing that information, utilising it and assimilating the costs and benefits of digital marketing technology becomes increasingly difficult for the STB owner-manager. Increasing customer numbers can be managed with the one-to-one communication and dynamic personalisation that digital marketing technology provides to perpetuate the personal relationship. E-mail and website applications facilitate communication, increase efficiency and enable personalisation (Simmons et al. 2008, Harrigan et al. 2012b).

Digital technology has created a paradigm shift in the relationships between companies and their customers, particularly tourism customers. Long-term STB success will come from their ability of businesses to adapt to changes in customers' needs and the digital data they create by being flexible and efficient (Thompson et al. 2013). The level of digital marketing within the STB will be influenced by the expertise and experience of the owner-manager, identified as two of the most important factors in determining the success of a business (Carson 1985, Morris 2009). The influence of the owner-manager is in accordance with

their attitude towards change and how positively or negatively they view digital marketing technology.

2.5 Barriers to digital marketing technology adoption

The internet and digital marketing technology have altered the marketing environment of STBs (Elliott and Boshoff 2007) and uncertainty exists as to how to exploit it within the community (Peltier et al. 2009; Morgan-Thomas 2016). This uncertainty is demonstrated by the continuing state of flux of the adoption of digital marketing technology in organisations across tourism (Dredge et al. 2018) and other industries. Furthermore, only 20% of UK small and medium enterprises consider their digital capabilities as good (Baker et al. 2015).

The potential of the digital economy is not being exploited across Europe with 41% of EU businesses not adopting any of the four advanced technologies, namely mobile, social media, cloud computing and big data, and, less than 2% are taking full advantage of these digital opportunities (European Tourism Forum 2016). Despite the business case to adopt digital marketing technology, the barriers in doing so are not being overcome by all STBs as those businesses that have a web presence or engage with customers via social media are in the minority (Alford and Page, 2015).

The lack of a web presence may be explained by the existence of gaps in practitioner understanding of websites, deficiency in knowledge, absence of necessary motivation, unawareness of latent benefits and a dependency on third party skills (Kriechbaumer and Christodoulidou 2014). The importance of the internet and how it has inexorably changed the marketing environment cannot be denied, but there is a lack of certainty on how to maximise its marketing contribution by the STB as it is difficult to isolate its impact and measure its marketing success (Elliott and Boshoff 2007; Alford and Page 2015).

STBs require support to choose and use marketing tools from the vast array and complexity of applications available to them to help navigate the digital landscape. Considerations are the rate of technological change – cutting-edge tools and

applications soon become obsolete and are replaced with new applications and approaches. Even business owners with marketing knowledge and experience have difficulty when selecting tools and measuring their effectiveness (Ateljevic 2007; Leeflang et al. 2014). The varying nature of social media site popularity, expectations for seamless use of mobile technology and search engine optimisation have all gained in importance and vie for attention in terms of the STBs limited digital marketing resources (Kriechbaumer and Christodoulidou 2014).

Digital marketing technology generates unprecedented amounts of customer data that require secure storage in accordance with the General Data Protection Regulations (Data Protection Act 2018). Data breaches have resulted in record fines being proposed by the Information Commissioner's Office (www.ico.org.uk) for large companies (e.g. BA £183.39m, Marriott £99m) as well as SMEs (e.g. Doorstep Dispensaree Ltd and Superior Style Home Improvements Ltd). The 2018 Data Protection Act governs how customer data may be stored and analysed to generate intelligence for decision making and for its subsequent use. Any customer data that is not integrated cannot provide the rich source of information available when combining multiple digital data sources (Ateljevic 2007; Vatash 2018), however there is risk associated with its storage, management and use for the STB owner-manager.

Companies using digital marketing technology can become overwhelmed with the volume of customer data that is generated, but in some STBs customer data is often held in rudimentary form (Ateljevic 2007) and they need to know how to generate insight from that information to provide customer value and effectively compete (de Swaan Arons et al. 2014). Selecting from a plethora of digital metrics applications requires advice and guidance as does assessing their effectiveness in terms of the time and financial cost of using analytical tools (Chaffey and Patron 2012). Developing awareness of the service they have to offer via a proliferation of communication channels requires a certain skill set (Leeflang et al. 2014) to understand the appropriate marketing communication and analysis tools to use (Harrigan et al. 2012b), and when to change them are further considerations.

All small businesses face difficulties in measuring the return from digital technology investment (Thompson et al. 2013; Jones et al. 2014; Leeflang et al. 2014) and have many barriers to technology adoption (Barba-Sanchez et al. 2007; Wolcott et al. 2008) including managing the volume of data that digital marketing technology provides (Leeflang et al. 2014). Whilst digital technology can provide unrivalled marketing metrics for campaign success and key performance indicators, there are significant up front investments (time and money) in developing such marketing practices and many businesses find it difficult to identify and measure the return from this investment (Thompson et al. 2013; Jones et al. 2014; Leeflang et al. 2014). The necessary investments are associated with purchasing digital technologies, their implementation into business practice and the time required to become proficient and skilled in their deployment. The latter often requires external expertise due to a lack of skilled, specialist employees in small businesses (Ateljevic 2007). Indeed, commission charging intermediaries, such as online booking agents, dominate the tourism industry and enable STBs to extend their markets and thereby achieve a wider reach, but this comes with considerable costs to the business.

2.6 Conclusion

Whilst the tourism and travel industry is considered an early adopter of digital technology and as an innovator in systems and processes, STBs have a lack of propensity to innovate (Shaw and Williams 2010) and there is limited research on innovative, digital marketing practices in tourism (Thomas and Wood 2014). Theory development is required to build on the partial insights on marketing innovation and the use of digital marketing technology in STBs (Thomas et al. 2011). Indeed, the impact of using digital marketing technology as a driver of innovation still requires investigation (Hjalager 2010). Consequently, the empirical validation of marketing innovation from the use of customer data generated by digital marketing technology in STBs is inadequate (Aldebert et al. 2011) as is the influence of an innovation orientation driving the adoption and use of digital marketing technology.

Entrepreneurial, innovative firms are more successful over time (Morris et al. 2002), but they are in the minority in the STB sector (Thomas et al. 2011). STBs are the core of the tourism industry but are seen as the laggards that prevent economic development, growth and innovation according to Thomas et al. (2011) and the effect of innovation on growth is not clear in STBs (Thompson et al. 2013). Shaw and Williams (2010) also identified that the innovation associated with information technology and digital marketing is a significant challenge for some tourism businesses as it is linked to learning, which is critical to being competitive and to business sustainability. Critical knowledge and information are key constituents of learning and it is how businesses use customer data to drive innovation that also requires research (Williams and Shaw 2011). An example of using digital technology for innovative marketing is through e-CRM (Harrigan et al. 2013) but there is little evidence as to how this is done in tourism, for example integrating analytics (Harrigan et al. 2012b) and the impact of social media (Hjalager 2010; Xiang and Gretzel 2010).

There is uncertainty as to how to maximise the marketing contribution of digital marketing technology in STBs. These businesses find it difficult to isolate the impact of digital technology in general (Ateljevic 2007; Elliott and Boshoff 2007; Taiminen and Karjaluoto 2015; Alford and Page 2015), they find measuring the return on digital technology investment for marketing problematic (Thompson et al. 2013; Jones et al. 2014), and how to assess its effectiveness (Leeflang et al. 2014). It is evident that the benefits of adopting digital marketing technology have to be clear and measurable for STB owner-managers (Aldebert 2011) in order to gain greater purchase but it remains difficult to isolate the impact of the digital technology on various measures of marketing success (Elliott and Boshoff 2007). There is still a gap in STB practitioner understanding of websites and digital technology (Kriechbaumer and Christodoulidou 2014) and the obstacles to bridge the gap include resource scarcity and lack of expertise, knowledge deficiency, absence of necessary motivation, unawareness of the benefits and a dependency on third party skills that owner-managers cannot always effectively manage.

The lack of resources and marketing expertise may result in the STB owner-manager taking responsibility for marketing the business. Consequently, the STB

owner-manager's attitude towards technology is part of determining their role in driving adoption and use of digital marketing technology, as does their approach to marketing. Therefore, there is requirement for a marketing-led framework for the adoption and use of digital marketing technology that complements the unique characteristics of the STB. Combining the owner-manager attitude towards digital marketing technology and marketing orientation within the framework will help to identify the key components that drive the use of digital marketing technology in the STB. The connection between entrepreneurship, marketing and digital marketing technology adoption in small businesses and STBs is discussed in chapter 3.

CHAPTER 3

ENTREPRENEURIAL MARKETING

3.1 Introduction

Today's unpredictable, changeable, fast-paced marketing environment creates uncertainty in small businesses (SBs) and small tourism businesses (STBs) (Peltier et al. 2012) and provides a context for applying an entrepreneurial style of marketing due to its adaptive nature, innovation focus and opportunity exploitation (Morrish 2011; Morrish and Deacon 2011; Renton et al. 2015; Whalen et al. 2015). Entrepreneurial marketing (EM) has been defined as the "proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resource leveraging and value creation" (Morris et al. 2002, p.5). This definition neatly combines proactivity, opportunity focus, risk taking and innovation (the elements of entrepreneurship) with customer focus and value creation that reflect the marketing components and resource leveraging. EM is different from traditional marketing in the way of thinking and doing marketing as it is characterised by intuitive, informal (Collinson and Shaw 2001; Ioniţă 2012; Fillis and Wagner 2005), adaptive processes (Hills et al. 2008) and speed of decision making (Collinson and Shaw 2001) with vision and opportunity recognition at its core (Fillis and Wagner 2005).

Focus on the market is essential to the EM approach as it is with all marketing and the market becomes more accessible with the advent of digital technology, enabling business owners the opportunity to access information and data that it generates and records. Because of the focus on the customer and the entrepreneurial desire to create opportunities, the advantages of using digital marketing technology come to the fore. Digital marketing technology generates customer data through interaction and engagement and provides access to larger volumes of customers by extending the reach of the business to new markets. Digital marketing technology can extend the business network and, when combined with associates, suppliers and customers, it can create value through market intelligence, creativity and ideas generation (Hills et al. 2008; Jones et al.

2013a). In uncertain environments the ability to adapt quickly, respond to situations, and make rapid decisions are key capabilities for creating a competitive advantage and growth. Digital marketing technology can provide virtually real-time data in order to facilitate and inform rapid decision making by interpreting data from digital marketing applications and analytical tools. Yet, digital technology has only relatively recently been associated with the EM construct (Quinton and Harridge-March 2006; Harrigan et al. 2012a).

As previously discussed, the adoption and use of digital marketing technology by small businesses and STBs is low and the level of engagement with digital marketing technology is superficial (Royle and Laing 2014). The owner-manager tends to be the controller and key decision-maker in small businesses, consequently the marketing orientation of the STB essentially stems from them - Fillis and Wagner (2005) called this the owner-manager orientation. Yet an important distinction must be made between those orientations that are styles and ways of managing the businesses versus goal orientations, for example, Getz and Petersen (2005) considered growth and profit orientation in family tourism businesses and Franco et al. (2014) used growth to distinguish between entrepreneurial and non-entrepreneurial business founders and owners. Different approaches to marketing can therefore be associated with the orientation of the owner-manager (Morris et al. 2002, Hills et al. 2008, Ioniţă 2012) as well as its influence on the adoption and use of digital marketing technology (Jones et al. 2003, Fillis and Wagner 2005, Elliott and Boshoff 2007, Simmons et al. 2011, Thompson et al. 2013). However, with an entrepreneurial and innovative orientation STB owner-managers can significantly contribute to economic development (Barba-Sanchez et al. 2007) and, when applied to marketing, can take advantage of the opportunities that digital marketing technology has to offer.

There is a lack of marketing-led frameworks to assist the STB with the adoption and use of digital marketing technology by the STB (Chaffey 2010; Jones et al. 2015) and this chapter sets out the rationale for an entrepreneurial marketing approach by the owner-manager being more suitable than traditional marketing methods for today's digital environment. This chapter examines and evaluates the EM literature in order to contribute to the conceptual, marketing-led framework for

the study. It begins with an exploration of the development of EM as a construct, its dimensions and how it has been defined in comparison to traditional marketing. The second discussion centres on the research streams that characterise the marketing and entrepreneurial interface and the relevance of EM to small businesses and digital marketing technology. Specifically, the business operating environment, the owner-manager and entrepreneurial marketing orientation are examined. Finally, the chapter closes with a summary of EM and the research gaps addressed in this study.

3.2 Entrepreneurial marketing development

3.2.1 The origins of entrepreneurial marketing

Throughout the development of marketing, the fundamental concept of what we understand as 'marketing' has not changed since its conception in 1910 (Bartels 1976). As defined by the American Marketing Association (AMA 2017) marketing is the creation, communication, delivery, and exchange of products and services that have value for customers, clients, partners, and society at large. As a process, marketing uses the best techniques available to find consistent sources of profitable sales to parties who are willing to pay for goods and services that provide them with value and utility (Shaw and Tamilia 2001). Today's business operating conditions are still subject to change, complexity, chaos and ambiguity (Morris et al. 2002) and this has affected the marketing environment. There has always been a need to consider the impact of changing environmental conditions in the development of marketing (Bartels 1976) – recently, they are identified as globalisation, digital technology and the empowered, connected customer (Reibstein et al. 2009). Recent research has reflected some aspects of the continuing evolution of marketing with new ideas adding to the discipline including EM. As a concept, EM began to emerge in the 1980s gaining significant momentum in the early 2000s. EM has been associated with the marketing approaches of small businesses with limited resources and sometimes in the informal, unplanned, visionary, marketing focus of entrepreneurs (Morris et al. 2002).

The first link between entrepreneurship and marketing came from Lee (1976) commenting on the need for more entrepreneurs in corporate marketing departments. Ten years later, Carson (1985) connected entrepreneurs with sound marketing experience to success in small and medium enterprises (SMEs) and later described the distinctive marketing style of some SMEs as EM (Carson et al. 1995). Early research concerned the connection between entrepreneurship and marketing theory (for example, Miles and Arnold 1991; Hills and La Forge 1992; Morris and Lewis 1995). Nevertheless, it was not until 2001 that EM was discussed as a potential theory (e.g. Collinson and Shaw 2001) and suggested definitions and descriptions followed the paper by Morris et al. (2002) conceptualising EM as a construct and a different approach to traditional marketing.

Many definitions of EM have been developed since its conception (for example, Morris et al. 2002; Hills et al. 2010; Ioniţă 2012; Whalen et al. 2015). A selection of descriptions and definitions of EM and their authors are given in Table 3.1 to demonstrate its theoretical development. Each definition reflects the dynamic nature of the discipline, its recency, and the fact that there is not one, widely accepted definition of EM (Hills et al. 2010). The EM descriptions include behaviours, actions, and dispositions of the controlling individual, processes that incorporate internal and external elements to the business and finally, these businesses are not characterised by their size.

The EM definition by Morris et al. (2002) has been extended with two further descriptions highlighting the environmental and behavioural aspects of EM - opportunity-seeking ways of thinking and acting in changing operating conditions. The 2002 definition and descriptions are a synthesised conceptualisation of marketing as a proactive, opportunity-led focus that companies can use to act entrepreneurially (Morrish et al. 2010). Nevertheless, EM as an integrative marketing process is only appropriate according to the circumstances of each individual business as opposed to a panacea (Morris et al. 2002) and can be practiced in organisations irrespective of size (Kraus et al. 2010).

Table 3.1: Entrepreneurial marketing definitions, descriptions and authors

Entrepreneurial marketing definitions and descriptions	**Author(s)**
EM is an integrative conceptualization that reflects such alternative perspectives as guerrilla marketing, radical marketing, expeditionary marketing, disruptive marketing and others (description)	Morris et al. 2002, p.1
EM is the proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resource leveraging and value creation (definition)	Morris et al. 2002, p.5
EM is an integrative construct for an era of change, complexity, chaos, contradiction and diminishing resources (description)	Morris et al. 2002, p.5
EM is fundamentally an opportunity-driven and opportunity-seeking way of thinking and acting (description)	Morris et al. 2002, p.13
EM is a spirit, an orientation as well as a process of passionately pursuing opportunities and launching and growing ventures that create perceived customer value through relationships by employing innovativeness, creativity, selling, market immersion, networking and flexibility (description)	Hills et al. 2010, p.6
EM is an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders and that is characterized by innovativeness, risk-taking, proactiveness, and may be performed without resources currently controlled (definition)	Kraus et al. 2010, p.26
EM is best conceived not as a nexus between marketing and entrepreneurship, but as an augmented process, where both the entrepreneur and the customer are the core actors, co-creating value within the marketing environment (description)	Morrish 2011, p.110
EM is a set of processes of creating, communicating and delivering value, guided by effectual logic and used in highly uncertain business environments (definition)	Ioniţă 2012, p.147
EM is advanced, customer-centric, interactive, and effective – based on the resources available (description)	Hills Hultman 2013, p.438
EM is a combination of innovative, proactive, and risk-taking activities that create, communicate, and deliver value to and by customers, entrepreneurs, marketers, their partners, and society at large (definition)	Whalen et al. 2015, p.3
EM is a configuration of activities that emerge from entrepreneur decisions and actions for pursuing business objectives in stable and turbulent environments that incorporate opportunity-seeking, resource-organising and risk-accepting behaviours to create multiple stakeholder value (definition)	Morrish and Jones 2020

Hills et al. (2008) have compared EM and traditional marketing practices and found that businesses with an EM orientation have a greater focus on selling by creating new demand and wealth through flexible tactics and adaptive strategies. The EM concept was extended further by Hills et al. (2010) and their proposal was that EM is embodied with an entrepreneurial spirit, a passion, and immersive behaviour. EM recognises the entrepreneur and the customer as central actors in the marketing process, which is made explicit in Morrish's 2010 definition and reinforcing the work by Morris et al. (2002). It is the entrepreneurs who recognise, explore and exploit opportunities as they are innovation orientated (driven by ideas

and intuition) rather than simply customer-oriented (driven by assessments of market needs). There is also acknowledgement of the turbulent, dynamic environment in the Hills et al. (2010) definition that starts to work towards later explanations of EM and more recently recognition that EM suits post disaster business recovery (Morrish and Jones 2020) as well as stable operating conditions.

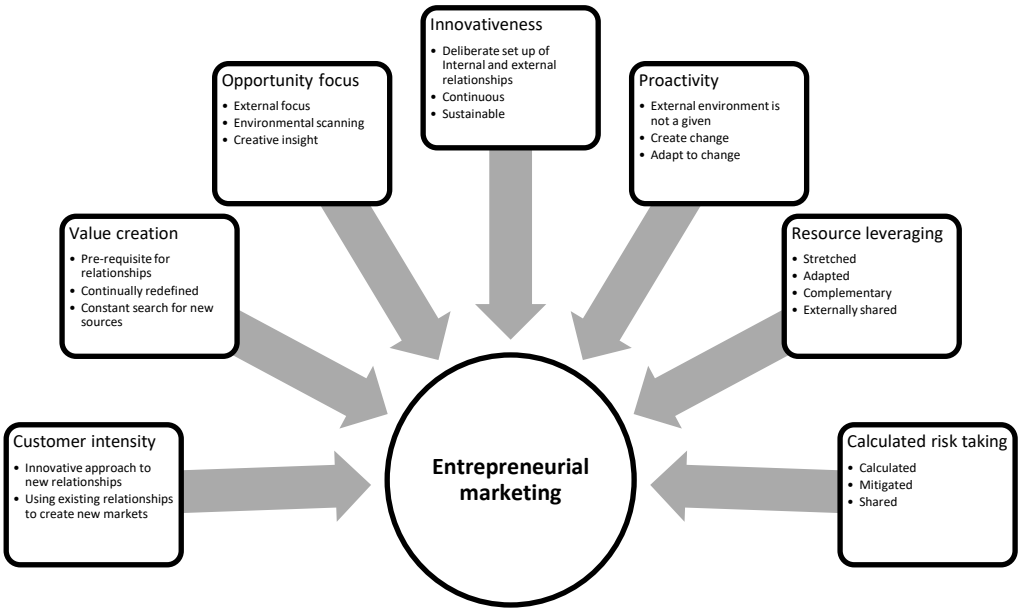
The extension of EM theory to include effectual decision making (Sarasvathy 2001b) was introduced by Ioniţă (2012) and further developed by Hills and Hultman (2013) through their description referring to available resources. When Sarasvathy (2001a) contrasted causal rationality with effectual logic, one principle reflected the starting point of effectuation - the means available to the entrepreneur as opposed to the end goal or objective which may have to change given an unpredictable environment. The given means are related to the individual and are available to everybody as their 'pool of resources' to be leveraged according to Read et al. (2011, p.73). Sarasvathy (2001a) categorised the means of the individual in three ways. First, 'who they are', their traits, abilities and attributes i.e. their personality, how they 'do' business, how they make decisions, their abilities, skills and competences. The second aspect, 'what they know', is categorised by their knowledge, education, experience, expertise and how they learn. Finally, who they know relates to their network i.e. their peers, contemporaries, family, social network, business contacts and stakeholders.

Effectuation reflects the three essential marketing dimensions defined by Webster (1992) as culture, strategy and tactics. The development of EM through these definitions demonstrates that it is more than just a marketing process. EM is a culture that emanates from the entrepreneurial individual and is focussed on the customer and market. The importance of the customer to the entrepreneur is central in guiding the organisation in developing a marketing strategy that correctly positions the product or service in the marketplace; and then tactics determine the marketing mix variables. Morris et al. (2002) positioned EM using these three dimensions, essentially placing the customer as the focus, with proactive learning about the customer and market and the operating environment determining marketing strategy and tactics.

3.2.2 Entrepreneurial marketing dimensions

EM was identified as a different marketing process (Morris et al. 2002; Miles et al. 2015) based on inductive research that investigated the marketing commonalities and differences in how small and medium enterprises operate (Gilmore et al. 2013; Miles et al. 2015). Morris et al. (2002) explored EM as a construct and identified seven underlying dimensions - customer intensity; value creation; opportunity focus; innovativeness; proactivity; resource leveraging; and calculated risk-taking. These dimensions have been summarised in Figure 3.1 from the original definition by Morris et al. (2002).

Figure 3.1: Dimensions of entrepreneurial marketing



(Adapted from Morris et al. 2002)

Some small businesses exhibited a different way of marketing by becoming innovative, creative and entrepreneurial in their thinking and behaviour and were, therefore, an early focus for EM research (Hills et al. 2010). In other words, combining the marketing orientations of customer intensity and customer value creation with the entrepreneurial dimensions of opportunity focus, innovativeness, proactivity, resource leveraging and calculated risk-taking (Kurgun et al. 2011). However, it is worth noting that the influence of entrepreneurial theory has also been applied to the marketing functions and philosophies of large companies, not just smaller ones (Hills and La Forge 1992; Miles et al. 2015; Chaston 2016).

3.2.3 Entrepreneurial marketing compared to traditional marketing

There are a number of elements characterising the research at the marketing and entrepreneurial interface (MEI) pertinent to this study that will be discussed in section 3.3. Initially, however, it is necessary to understand the research that differentiated EM from traditional marketing (Morris et al. 2002; Hills et al. 2008; Hills et al. 2010; Morrish et al. 2010; Morrish and Deacon 2011; Ioniţă 2012; Whalen et al. 2015).

Whilst there is still a focus on the customer, EM is different from traditional marketing, defined as administrative marketing by the American Marketing Association (2017), and has been proven to be successful in unorthodox ways (Hills et al. 2008). The identifiable differences between traditional and entrepreneurial marketing can be summarised in terms of the operating environment, the market, functions within the organisation and entrepreneurial marketing characteristics (Table 3.2)

Table 3.2: Comparing traditional marketing to entrepreneurial marketing

Marketing Element	Traditional Marketing	Entrepreneurial Marketing
Environment	Formally researched and adapted to	Aim to influence and shape
Market	Formally assessed, segmented, reactive and adaptive	Intuitively assessed, experienced, discussed and created
Organisational function	Separate and identifiable	Integral throughout
Strategic orientation	Defined, planned, rational and sequential	Immersive, agile and adaptive
Value creation	Communicated through product, the transaction and developed through relationships	Co-created through active, continuous dialogue
Innovation	Marketing supports innovation of others	Marketing itself is innovative
Opportunities	Identified, investigated and analysed	Sought after, created through innovation
Resource management	Efficiently utilised, committed and accounted for with set budgets	Maximised, creatively exploited and sometimes external
Risk management	Anticipation, avoidance and minimised through planning	Mitigated through sharing

Adapted from Morrish et al. 2010, Hills et al. 2008 and Morris et al. 2002

Turbulent, dynamic, uncertain environments, with changing rules of engagement suit EM and it is a viable alternative to deal with the increasing ineffectiveness attributed to traditional marketing (Whalen et al. 2015). This suitability of EM is evidenced in the research on 'born global' firms by Sullivan Mort et al. (2012, p.6). They take advantage of opportunities arising from changing situations, having identified and reacted to them faster than their competitors, and consequently achieving a competitive advantage.

The environment is analysed in both traditional and entrepreneurial marketing, but it is done in different ways. Traditional marketing involves research in a rational, objective, sequential manner where market segments are identified, and analysed for their potential value, and marketing is budget led (Hills et al. 2008). Information from the market is the driver for the firm to create the products and services required but viewing it as a one-way process separates the customer from value creation (Prahalad and Ramaswamy 2004). Where the environment is relatively stable and predictable, even if it is complex, traditional marketing methods may be successfully employed. With EM, the market is embraced: the entrepreneur lives it and continuously interacts with it. The entrepreneur's assessment of the market is intuitive and constant attention is paid to how customer value may be improved, and therefore marketing becomes a core function within all areas of the organisation. As businesses grow, marketing success comes from flexible, agile, adaptable, cross-functional, customer-focussed teams (Hills et al. 2008; de Swaan Arons et al. 2014).

Hills et al. (2008) found commitment to opportunities, opportunity recognition, control of resources and management structures were different when comparing EM to traditional marketing. Opportunities are encouraged to be identified and exploited throughout the entrepreneurial organisation and strategy adapted accordingly. EM led firms focus on the creation of new value and tend to be tactically flexible and to focus their marketing efforts on promotion and selling.

Entrepreneurs will use various marketing strategies throughout the business lifecycle, actively seeking possibilities, developing relationships and marketing activities by constantly reacting to and making sense of their environment (Lam

and Harker 2015). Business goals develop because of working with the environment and the entrepreneur asking, ‘what can we do within our means’, rather than ‘what should we do given our environment’ (Dew et al. 2008, p.54), reflecting Sarasvathy’s effectuation (2001a). This generates variation and wider, unanticipated possibilities rather than simply adapting to environmental conditions.

Traditional marketing identifies required resources through the planning process, and once committed they are (ideally) efficiently used to achieve financial goals. EM is not constrained by owned or controlled resources – any resources are leveraged and stretched to achieve more; utilised for other purposes; externally sourced to achieve specific purposes; combined to create greater value and used in order to gain access to more (Morris et al. 2002).

Strategic alliances, collaborative marketing projects, outsourcing and performance-based resource management are characteristics of both traditional and entrepreneurial marketing. The reduced reliance on formal planning and the increased importance of flexibility and rapid decision making in EM results in the ability to commit and withdraw from projects more easily - it is the informal nature of EM that tends to mitigate risk. It is possible to minimise losses, as only those that can afford to be lost are committed in the first instance, but this requires judgemental skills on behalf of the individual practicing EM.

In reality, it is the operating context, company life stage and those involved in marketing that determine the small business approach to marketing and there is evidence that a combination of both entrepreneurial and traditional techniques are employed, depending on the circumstance (Morris et al. 2002; Morrish et al. 2010; Gilmore 2011; Morrish and Deacon 2011; Lam and Harker 2015).

3.3 The marketing and entrepreneurial interface (MEI)

3.3.1 Combining marketing and entrepreneurial research

Based in entrepreneurship and the study of entrepreneurs, combined with the marketing approach of some small and medium businesses (Miles et al. 2015), the

EM paradigm was revealed in research at the marketing and entrepreneurship interface (MEI). The EM research field is a dynamic domain (Hills et al. 2010) that is wide-reaching with several investigative parallel streams at the MEI. The roots of EM lie in the traditions of the business and management school of thought and provide the basis for understanding EM as a complex concept. Therefore, it needs to be differentiated from its entrepreneurship, marketing and management heritage in order to stand alone as a theoretical discipline (Miles et al. 2015). Notwithstanding this, EM has been gaining scholarly significance (Carson et al. 1995, Hills et at al. 2010), and Morrish (2011) acknowledged the work of dedicated scholars that has ensured the acceptance of EM as a legitimate research field (Hills and Hultman 2013). Gilmore et al. (2013) posits that EM is not yet a significant paradigm in its own right, but there are calls for it to be recognised as a distinct area within marketing theory (Miles et al. 2015; Whalen et al. 2015). The volume of research at the MEI lends credence to this call and the widespread view that EM encapsulates elements of marketing that are not easily explained by existing traditional marketing concepts and theories (Morrish and Deacon 2011).

EM research developed from two key and distinct business disciplines (Collinson and Shaw 2001) – marketing as a well-established business function and entrepreneurship as a relatively recently developed management style or orientation, incorporating specific behaviours (Hills et al. 2010). Miles and Arnold (1991) first identified the significance of the relationship between the two disciplines as they found more entrepreneurial firms demonstrated a stronger marketing orientation and Day (1994) found that entrepreneurs who practiced marketing were more successful than those who did not.

Much of the early research on the MEI centred on new business ventures and small businesses (Morris and Lewis 1995). MEI research was combined to provide an understanding of several conceptualisations generated by the different type of marketing activities often carried out by small businesses. These incorporate network and relationship building (Collinson and Shaw, 2001; Bjerke and Hultman, 2002), creating a competitive advantage (Miles and Darroch 2006), and the entrepreneurial process of opportunity discovery and creation, assessment and exploitation (Shane and Venkataraman 2000). However, there is significant

evidence surrounding the impact of entrepreneurial theory in larger organisations (Hills and La Forge 1992) specifically on marketing strategy and promotional tactics, customer behaviour, new product development and sales (Morris and Lewis 1995), so it is not exclusively the domain of the small business (Hills and LaForge 1992; Miles et al. 2005; Chaston 2016).

Scholars have documented the importance of EM through empirical evidence of the differences between successful EM and traditional marketing (Morris et al. 2002; Hills et al. 2008; Hills et al. 2010; Morrish et al. 2010; Morrish and Deacon 2011; Ioniţă 2012; Whalen et al. 2015). Furthermore, four different research streams have been identified (Hansen and Eggers 2010) – commonalities between marketing and entrepreneurship; entrepreneurship themes within a context of marketing theory; marketing themes within a context of entrepreneurship theory; and distinct concepts resulting from combining marketing and entrepreneurship. These streams have since been updated and adapted to include entrepreneurial and SME marketing (Hansen et al. 2020).

The first stream emphasises the customer orientation of both disciplines (Morrish 2010) in addition to opportunity recognition, innovation and successfully satisfying customer needs – all important elements of marketing (Collinson and Shaw 2001) and the creation of value (Miles et al. 2011). EM as entrepreneurship in marketing in the second stream reflects the proactive nature of opportunity creation, recognition and exploitation (Ardichvili 2003; Swenson et al. 2012) and the ability to create change and adapt to change (Miles et al. 2011). This stream includes effectuation theory (Sarasvathy 2001a; Hills and Hultman 2013) to manage environmental uncertainty with the ability to use available means (through frequent contact with the business network) to create a number of different possible outcomes (by resource leveraging), and adapt quickly to reduce risk. This stream involves creating markets and is evidence of EM in practice in high growth businesses and born global firms (Sullivan Mort et al. 2012). The third stream reflects marketing strategy and again emphasises the importance of opportunity recognition and innovation to generate economic value (Miles and Darroch 2006). However, this opportunistic behaviour comes from understanding the marketplace i.e. customers, competitors and suppliers, and monitoring environmental changes

such as digital marketing technology advancement and competitor activity. This stream also considers marketing as tactical and reactive as opposed to proactive but still requires the ability to exploit any change for a competitive advantage. The final stream is illustrated by the studies in SME marketing and marketing behaviour by the individual entrepreneur or owner-manager (Morrish et al. 2010), incorporating elements such as decision making (Hills and Hultman 2013; Gilmore et al. 2013) and a learning orientation (Dew et al. 2008; Shaw and Williams 2010; Ioniţă 2012).

During its development, EM has been criticised as a research field (Morrish 2011) for being scattered (Hills and Hultman 2011), confused (Miles et al. 2015), fragmented (Schuster et al. 2015) and disconnected (Schjoedt and Michalski 2016) with many complex, conceptual frameworks (for example, Bjerke and Hultman 2002; Quinton and Harridge–March; 2006; Jones and Rowley 2009). This criticism can be accounted for by the ambiguity over the essential nature of EM, its varying definitions and the multi-directional development of research in the discipline (Hills and Hultman 2011).

Literature reviews on EM have identified that entrepreneurship theory has dominated the research field (Hansen and Eggers 2010) with much of the focus reflecting entrepreneurship theory with outcomes of performance and growth (Morrish et al. 2020). However, many tourism businesses are not focussed on growth, instead the focus is on the lifestyle that the business provides (Ateljevic and Doorne 2000; Komppula 2014) but that does not mean they do not necessarily want to compete. In the following section EM research will be discussed through a range of perspectives within a comparative and integrated context. The section highlights the specific EM characteristics that recognise the external environment and the internal organisation.

3.3.2 Entrepreneurial marketing and the operating environment

Almost two decades ago, Porter (2001) stated the question was not whether to deploy internet technology in order to compete, but “how to deploy it” (Porter 2001, p.64). That question still applies – however, the digital environment is

greater than the internet. More recently, according to Diageo's CEO, Ivan Menenzes, "it is now a case of marketing effectiveness in a digital world, not just successful digital marketing" (cited by Ritson 2015).

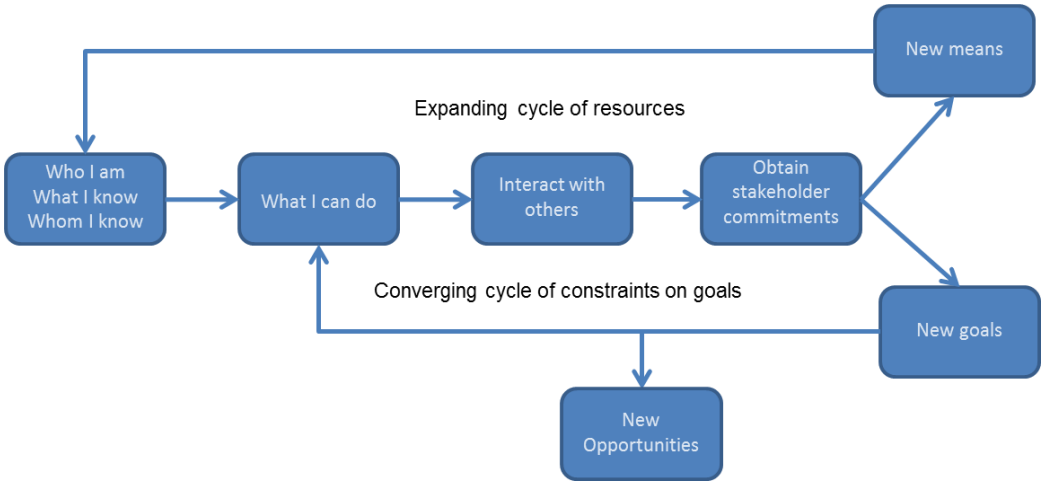
A common theme of EM definitions and descriptions is the business operating environment and that incorporates the increasingly digital world. Morris et al. (2002) considered the effect of the operating environment on the internal organisation of the firm, specifically in terms of its culture, marketing and entrepreneurial orientation and concluded that the marketing orientation would be, at times, more or less entrepreneurial according to the internal and external environmental conditions. A changing environment can lead to innovation, risk taking and proactivity through effective responses to market conditions (Morrish et al. 2010). The opportunity-seeking focus through creative and innovative action, can shape or generate new markets for a competitive advantage resulting in effective EM processes in uncertain economic, technological and market conditions - an appropriate strategic response to a turbulent digital environment (Miles and Arnold 1991).

There is great reliance by the owner-manager on the business network as a leveraged resource for marketing in small businesses (Carson et al. 2004), described by Jones et al. (2013b) as intra-firm (employees); social (employee friends and family); marketing and sales (agents, associations); innovation (industry innovators, universities, entrepreneurs); customer (prospects, frequent and occasional); and business stakeholders. The marketing network generates valuable information as an alternative to formal market research and is a key component in the development of entrepreneurial theory, termed effectual reasoning or effectuation (Sarasvathy 2001a) and is part of the means available to an individual to create ideas, collaborate with and share risk through joint commitments.

As a behavioural theory of entrepreneurs, effectuation, conceived by Sarasvathy (2001c), informs EM theory development in several ways. First, it recognises the role of the individual and how they act (Lam and Harker 2015; Whalen et al. 2015) and make decisions (Sullivan Mort et al. 2012; Fillis 2015). Second, EM actions

may not be totally unplanned but tend to be non-linear and not necessarily logical (Sullivan Mort et al. 2012), consequently, uncertainty is managed due to the focus on creating opportunities to shape the operating environment. Third, opportunity creation requires creativity and rapid learning to take advantage of contingencies or unexpected events as they arise. The ability to move fast allows for incremental innovation and digital marketing technology can create new offerings and new market segments (Morrish 2011). The effectual process or cycle is illustrated in Figure 3.2.

Figure 3.2: The effectual process



Adapted from Read and Sarasvathy 2005

The effectuation cycle is a dynamic model of behaviour that may lead to a number of outcomes – new ideas, products and new markets and therefore growth. Starting with an idea for something new or different, they begin with who they are and what they know – the means at their disposal. Potential partners or stakeholders are engaged as resources to enhance the entrepreneurs' means, resulting in new available resources and potentially new or adapted goals. The effectual cycle is strengthened by digital marketing technology as it contributes to what is known in the form of data and an additional means of access (i.e. who they know or who they need to know) that can be used to create new opportunities through the marketing network – employees, customers, stakeholders etc. Customer generated data (i.e. what they know) and frequent action and interaction with the marketing network (i.e. who they know and what the network knows) can create customer value through relationships, innovation, creativity and flexibility (Hills et al. 2008).

As previously stated, the network as a resource is a key component of Sarasvathy's (2001a) effectuation model and is used by some businesses owners to intuitively develop businesses, activities and plans. Competences are developed through the network by experiential learning of affordable initiatives with acceptable levels of risk (Ioniţă 2012). The level of risk is mitigated by sharing and a culture of trust that drives online collaboration (Harris and Rae 2009). Digital marketing technology provides an opportunity to widen the business network, makes communication more straightforward and network relationships are more easily maintained. Business networks, formal or informal, help marketing by providing customer and market information, and insight that may lead to incremental improvements or innovations for competitive advantage (O'Dwyer and Gilmore, 2013). The network generates valuable information as an alternative to formal market research, which is both time consuming and costly for the STB and is a way of creatively exploiting and maximising limited resources.

3.3.3 Entrepreneurial marketing and the business owner-manager

The role of the entrepreneur as an actor in the marketing process (Morrish 2011) is acknowledged in the various definitions of EM. Hills et al. (2010) identified the entrepreneur as central to EM characteristics in a business and key aspects are their personal goals as well as reputation, trust and credibility. Using the Morris et al. (2002) definition of EM and its seven core dimensions (proactive orientation; opportunity-driven; customer-intensity; innovation-focused; risk management; resource leveraging; and value creation), the impact of the individual may be explored and understood.

The dynamics of the environment help the development of a holistic entrepreneurial orientation (Miles and Arnold 1991) and an enquiring, driving nature within the individual. Marketing is used to create change and adapt to change (Morris et al. 2002) through a learning focus that supports innovation (Schindehutte 2008). EM is demonstrated in practice by appropriate management competences shaped by external uncertainty and core competences such as intuition (Fillis 2015; Morrish 2011; Hills et al. 2008; Collinson and Shaw 2001). The advent of digital technology can provide information from the marketplace;

however, it also requires the development of new digital skills (for example analytics) in order to exploit the possible opportunities arising from market data. By understanding the needs of the market, capabilities can be developed to respond to market requirements and changing conditions (Morrish et al. 2011).

EM requires the ability to identify and act upon opportunities. When the external operating environment is dynamic, the incidence of opportunities will increase (Morris et al. 2002) – but it is down to the competence of the individual to recognise the possibilities that these opportunities offer. The entrepreneur explores and exploits opportunities, and they are more innovation orientated i.e. creative and intuitive rather than having a complete focus on assessments of market (and customer) needs (Morrish 2011). Knowledge and skill are required to take advantage of the opportunities as well as the organisational freedom to requisition the necessary resources (Whalen et al. 2015).

Involving the customer at every stage of marketing is considered essential, as they sustain the business and provide information for new opportunities (Whalen et al. 2015; Vatash 2018). The responsibility for initiating an integrated customer focus approach through the organisation comes from the owner-manager. Successful entrepreneurs generally go beyond traditional marketing practice – their approach is not necessarily linear, logical and sequential but unconventional and 'organic' because they are close to their customers and understand their needs and preferences (Ioniţă 2012). The close customer relationship is pertinent as customers may provide information for the development of new opportunities (Whalen at al. 2015). EM is similar to relationship marketing but there is an emphasis on the entrepreneur to create new relationships and use existing relationships to break into new markets (Morris et al. 2002).

To some extent, digital marketing technology can help develop intuitive knowledge of the market as it generates data. However, there is a requirement for the owner-manager to develop new skills and competences to understand the insight that the data provides. Whilst it presents challenges for managing the volume of data that is available, as a resource it is the basis for customer focus and the development of high-quality personal service, opportunity creation, innovation

and value driving activities. Digital marketing technology allows closer customer relationships for many small business owners who have a large, disparate customer base. However, the business owner-manager needs skills and knowledge to recognise the opportunities customers provide and to take advantage of them, as well as the organisational freedom to allocate tangible resources so that the outcome of the opportunities may be maximised.

Another consideration for the owner-manager is a sustainable innovation focus, originating from a complex set of interrelationships that are maintained by the entrepreneur. Entrepreneurs encourage, champion and promote new ideas for products, services and processes that are accessible through the structure of the organisation (Morris et al. 2002). The innovation element of EM aims at building success in small businesses and is grounded in opportunity creation (Renton et al. 2015). Being innovative and entrepreneurial with marketing differentiates individuals and does not necessitate being a pioneer (Morrish 2011), it can simply come from learning and being flexible. The skills, competences and experiences of the individual are therefore essential in sustaining an innovation focus.

Connected to innovation is risk management - here the individual brings the confidence (through experience) to take risks but an EM approach results in calculated risk-taking from specific investigation that enables the risk to be mitigated or shared and purposefully managed. The entrepreneur influences the flexibility of the organisation through quick, informed decision making to take advantage of situations, as they arise, with minimum risk.

Another EM dimension is resource leveraging. Here the entrepreneurial individual is not necessarily constrained by the resources under their control and, ambition always exceeds resources (Morris et al. 2003). Essentially, entrepreneurs do more with less through insight, experience and skill. They recognise how to optimise resources, use resources in non-traditional ways and even utilise the resources of others to accomplish their goals (Morris et al. 2002). However, it is difficult for small businesses to identify knowledge gaps and acquire new knowledge without assistance (Hallin and Marnburg 2008). The assistance comes in the form of collaboration with the business (marketing) network – a critical factor for

successful growth and a key part of developing EM competences (Ioniţă 2012) and as previously stated, there is a great reliance on networks for marketing (Franco et al. 2014). The network is utilised to fill the gaps resulting from limited resources (marketing knowledge and time), lack of specialist expertise (tend to be generalists not specialists) and the reduced impact on the market (fewer sales and employees) according to Jones at al. (2013a). Close and integrated relationships are implicit in EM in order to develop value-creating activities through market intelligence and ideas generation. Digital marketing technology allows for a wider reach when searching for the right contacts but the personal skills and competences of the owner-manager are required to utilise it (Wolcott et al. 2008) and it requires care and attention to nurture and develop in order that the quality of advice is beneficial (Gilmore 2011). Stable, structured networks with strong, well established links support marketing decision making (Carson et al. 2004).

There is a motivation to create customer value as it is a prerequisite for ongoing sales, relationships and loyalty. The skill in this lies in creating, discovering and continually redefining value through a close association with the customer. It is the unique capabilities of entrepreneurs, and their business and social networks that generate the process, product or strategy innovations that create value (Morrish et al. 2010).

Morris et al. (2003) see EM as largely a matter of degree. EM may be incremental or revolutionary according to the levels of innovativeness, risk-taking and proactiveness (Morris and Lewis 1995) by the individual. EM requires the business to be opportunity driven, that necessitates imagination, vision, cleverness and originality (Morris et al. 2003), and EM often involves serendipity, intuition, flair and insight (Morris et al. 2002).

Individuals who practice EM use their vision, communication skills, visualisation, judgement and intuition for decision making with the ultimate aim of acquiring new consumers and attempts to control, manipulate and predict the market (Fillis, 2015). EM is achieved in practice by acquiring and implementing sets of appropriate competences shaped by both intuitive and rational thinking and what is required are more situation specific understanding stemming from individually

responsive behaviours (Cox and Ardley 2006). This can be done by being prepared to change managerial styles and systems when required as integrating digital marketing technology into a marketing programme requires behavioural change, moving away from the 'bolt-on' and piecemeal digital marketing approach employed by many small firms (Royle and Laing 2014). The challenge is, therefore, to develop the competences that are required by EM. However, not every small business wants to grow or innovate, and some that do are constrained by lack of knowledge. The key is to identify those owner-managers who want to learn and acquire knowledge to develop their skills (Thompson et al. 2013). Morris and Lewis (1995) found that successful entrepreneurial characteristics are learned and not inherited, but the environment must be conducive at the societal, industry and organisational level. Environments that encourage creativity, independence, autonomy, achievement, self-responsibility and assumption of calculated risks are likely to induce entrepreneurial behaviour and this generates a greater need for marketing knowledge. According to Ioniţă (2012), experiential learning may develop EM competences, and this is affected by the attitude towards risk of the owner-manager.

A learning philosophy or culture gives rise to an innovation orientation (Barba-Sanchez et al. 2007) - acquiring, transferring and using knowledge in order to innovate. Schindehutte et al. (2008) has argued that a learning focus is a key dimension of market driving behaviour that can encourage radical innovation. However, radical innovation is not required or expected from most STBs, as discussed earlier. The challenges they face are great enough without the innovation that is associated with digital technology and marketing. Adopting and using digital marketing technology involves an ongoing learning process (Shaw and Williams 2010) that can be interactive (Stamboulis and Skayannis 2003) as the digital world is constantly changing. It is a matter of the degree of learning, knowledge transfer, absorption and the ability to apply that knowledge that will impact on competences and capabilities of the STB owner-manager.

Implementing digital technology as a part of a core marketing strategy, is often based on the ideas developed by the entrepreneurial owner-manager (Martin and Matlay 2003). Entrepreneurial owner-managers with these ideas, and an interest in

digital technology, have recognised the marketing potential of digital technology, coupled with knowledge, they have been found to play a significant role in determining e-commerce activity in small firms (Simmons et al. 2008; Wolcott et al. 2008) and can be considered as having an entrepreneurial marketing orientation.

3.3.4 Understanding entrepreneurial marketing orientation

Gilmore (2011) argues that the basis for EM is understanding how owner-managers or entrepreneurs actually do business and how they make decisions – their orientation. EM acknowledges the impact of the personality, the mindset and the motivation of key decision makers in entrepreneurial forms of marketing (Lehman et al. 2014). The individual's personality reflects the personalised management style and content-specific marketing that is shaped by the owner-manager and the needs of the business.

Studies have found the relationship between an entrepreneurial orientation and marketing orientation are key to success in small business (Morris and Lewis 1995, Morrish and Deacon 2011, Jones and Rowley 2011). It is noted however, that realistically a combination of both market and entrepreneurial orientation is recommended as a strategy for marketing in the 21st century (Morrish et al. 2011). A market and customer orientation have been found to be a significant element of the relationship between digital marketing technology and the SB owner-manager (Morris et al. 2002; Fillis and Wagner 2005; Elliott and Boshoff 2007; Jones and Rowley 2011; Jones and Suoranta 2013; Alford and Page 2015).

EM was further developed by considering customer engagement, innovation and entrepreneurial approaches to marketing in the Entrepreneurial Marketing Innovation Customer Orientation (EMICO) framework (Jones and Rowley 2009; 2011; Jones et al. 2013b) - Table 3.3. The EMICO framework specifically emphasises a customer orientation and innovation orientation (elements of EM) as key dimensions alongside an entrepreneurial and marketing orientation. Jones et al. (2013b) proposed a combination of all the orientations into one framework described as an entrepreneurial marketing orientation (EMO).

Table 3.3: Entrepreneurial marketing orientation framework and descriptors

Dimension	Descriptors
Entrepreneurial Orientation	Research and development - level of investment, leadership, innovation Speed to market - competitive, collaborative, leadership Risk taking - calculated, opportunistic, intuitive, transformative, incremental Proactivity - exploitative, opportunity recognition, passion, commitment
Market Orientation	Exploiting markets - tactical vision, planned, niche, flexible, linked to personal goals Market intelligence - external, informal, personal contact and web-based networks Response to competitors - reactive, niche, quality differentiation Process integration - close, resource sharing, formal, project planning Networks Resource - leveraging, developing, value creating, daily contact
Innovation Orientation	Knowledge base - IT infrastructure, policies, procedures, information collection Propensity to innovate - stimulating creativity and innovation, new product, service, process
Customer Orientation	Customer responsiveness - response to feedback, reactive to changing needs Customer communications - building relationships, confidence, trust and reliability Delivering value - customer co-creation, prioritise satisfaction, understanding Promotion and sales - focus on tactical activities

(Adapted from Jones et al. 2013b)

Simmons et al. (2011) used Pelham and Wilson's (1996) small firm-specific scale to assess owner-managers marketing and entrepreneurial orientation as they often 'do' marketing and 'are' entrepreneurial without knowing what is involved. Jones and Rowley (2009; 2011) also used their scale to advance the ability to quantify the level of EMO in business owner-managers. By using measurement scales of the descriptors shown in Table 3.3, their framework explores the activities, attitudes and behaviours of owner-managers in small technology businesses (Jones and Rowley 2009; Jones and Rowley 2011).

An EMO encourages opportunity creation that is well served by the information that digital marketing technology may provide. However, it is worth noting that not all small businesses have an EM focus and not all EM focussed companies are small businesses (Bjerke and Hultman 2002). Not all small businesses want to innovate as returns are not guaranteed, thus, risk averse owner-managers are likely to be less innovative and innovations lower in number, minor and incremental (Thompson et al. 2013).

3.3.6 Entrepreneurial marketing theory summary

In 1982, Peters and Waterman identified having an entrepreneurial orientation as a characteristic in America's best-run companies in their study in search of industry excellence (Peters and Waterman 2004). Studies in 1987 (Morris and Paul) and 1991 (Miles and Arnold) identified more entrepreneurial firms demonstrating a stronger marketing orientation – connecting entrepreneurship and marketing as part of the same business philosophy, or, at a minimum, distinctly integrated constructs (Morris and Lewis 1995).

There is a fit between entrepreneurs identifying business enterprises and market scanning and opportunity analysis. An entrepreneurial marketing orientation excels when businesses are operating in dynamic, hostile and complex environments (Morris et al. 2002). This is because opportunities decrease due to increased competition; rapid changes in technology; changing customer needs; and short decision making windows. Entrepreneurs flourish as there is intensified pressure for innovative, calculated, risk-taking behaviour and survival is dependent on an effective response to the varying market conditions. As entrepreneurial behaviour can be learned and is not an inherent skill (Morris and Lewis 1995), environmental conditions that encourage the propensity to be innovative, proactive and risk taking if the owner-manager is open to such opportunities. When faced with these challenges, successful entrepreneurial marketers analyse the environment quickly, thoroughly and frequently and they implement short-term, flexible plans for marketing opportunities (Morris and Lewis 1995). The key then, is to encourage this marketing behaviour in STB owner-managers.

Globalisation, new technology and greater transparency have dramatically changed the business environment; organisations now operate in a world of risk and instability (Reeves and Deimler 2011). Businesses need to create value for a competitive advantage, but both must be sustainable to successfully compete. Skills and knowledge are required to identify opportunities as well as the ability to requisition resources to take advantage of them (Whalen et al. 2015). However, this will only lead to a temporary competitive advantage. The turbulent environment encourages EM opportunity exploitation however because the

environment is uncertain, it is only temporary, hence the need for sustainability and consistent, proactive behaviour. This leads to new skills, knowledge and use of resources that re-enforces the ability to manage the turbulent environment (Whalen et al. 2015).

According to Reeves et al. (2012) companies that position their strategy to their competitive environment, perform better than those that do not. They identified environmental predictability and malleability as two critical factors to determine the type of approach. Future, accurate forecasting of demand, competitive behaviour and market expectations are the component parts of predictability, and malleability is the extent to which a business and its competitors may shape the environment. Entrepreneurs consider the future unpredictable and they drive to shape and change their operating environment. The tourism industry, like most service industries, is unpredictable but it can be changed and demands a strategy that shapes it and is flexible. Tourism is well established, but digital marketing technology adoption is in a state of flux (Kriechbaumer and Christodoulidou 2014) - there is opportunity for growth with low entry barriers, high innovation rates, demand is hard to predict, and competitors change. The successful business shapes the unpredictable environment to its own advantage, as they embrace short or continual planning cycles, and rally customers, suppliers, networks through marketing, lobbying and well-informed partnerships (Reeves et al. 2012).

It is the dynamic technological conditions that provide a context for this research study and the influence of the owner-manager on the internal environment of the small business and how their EM behaviours manifest themselves in EM outcomes. The entrepreneurial marketing literature is summarised in a review spanning over 20 years, with an emphasis on more recent publications and includes 25 studies in table 3.4.

Table 3.4: Entrepreneurial marketing literature summary - environmental context (internal and external), behaviour and outcome

Author(s) and Year	Entrepreneurial Marketing Environmental Context		Entrepreneurial Marketing	
	External	Internal	Behaviour	Outcome
Morris and Lewis 1995	Turbulent, customers provide feedback	Opportunity-driven, flexible, effective response to market variations	Environmental scanning, market opportunity analysis, ongoing assessment of customer needs	Innovation, opportunity focus and exploitation, risk-taking, and proactivity, value creation, survival
Collinson and Shaw 2001	Changing environment, trusted networks	Ability to collect market information on a regular, daily basis is imperative, creative, task orientated, intuitive ability to anticipate changes in customer demands	Opportunistic, little formal planning, keen sense of customer needs, wants and demands, quick decision making, adaptable	Opportunity identification, proactivity, innovative, taking risks
Morris et al. 2002	Changing, complex, chaotic, contradictory and diminishing resources	Entrepreneur is driven, customer centric, strive to do better, to stay ahead	Innovation, customer intensity, alliances and networks,	Proactive identification and exploitation of opportunities
Morris et al. 2003	Dynamic, hostile, complex environments, rapid changes in technology, changing consumer needs, rapid resource obsolescence	Entrepreneur has imagination, vision, cleverness and originality, short decision windows	Opportunity driven behaviour (thinking and acting)	Opportunity focus
Quinton and Harridge-March 2006	Technology developments	Acquisition and manipulation of data, owner-manager intuitive or instinctive, recognising potential, – communication; knowledge; judgement; experience and planning	Developing customer relationships, marketing transformation	Opportunity maximisation, resource leveraging
Hills et al. 2008		Tactical flexibility, immersion, entrepreneurial experience, intuition	Adaptive	Creation of value, innovation
Morrish et al. 2010	Customer needs	Entrepreneur needs, desires, motives shape the firm's definition, core mission and culture	Leveraging unique capabilities and building networks	Innovation, value co-creation, opportunity exploitation

Author(s) and Year	Entrepreneurial Marketing Environmental Context		Entrepreneurial Marketing	
	External	Internal	Behaviour	Outcome
Hills et al. 2010		Intuitive, highly value customer, long-term growth focus, owner's personal goals, trust and credibility	Growing relationships	Customer value
Gilmore 2011		Close customer contact, owner-manager decision making	Network building	Resource leveraging, reacting to opportunities
Jones and Rowley 2011		Customer, competitor and internal co-ordination, speed to market, generating market intelligence	Using market intelligence, building networks and relationships, responsiveness to customers, understanding customer value	Risk taking , proactivity, value creation
Miles et al. 2011	Changing, dynamic	Acceptance of market change and dynamism	Innovative, experiential learning create advantage	Create value, pro-action and risk to exploit opportunities, radical innovation
Morris and Deacon 2011	Competitive	Personality of owner-manager drives the business	EM mindset	Innovation, compete successfully, growth
Morrish 2011	Changing	Key focus on both customer and entrepreneur wants and needs, intuitive	Move quickly, driven by ideas	Opportunity recognition and exploitation, value creation, innovation
Ioniţă 2012	Hostile and unpredictable	Living with customer needs and preferences	Experiential learning, effectual logic, decision making	Creating value
Sullivan Mort et al. 2012		International focus, perseverance, customer intimacy	Actively creating opportunities, market learning, effectual decision making, establishing legitimacy	Opportunity creation, resource enhancement, innovation
Gilmore et al. 2013		Entrepreneur's characteristics and requirements drive the business	Ways of decision making	Sustainable future propositions

Author(s) and Year	Entrepreneurial Marketing Environmental Context		Entrepreneurial Marketing	
	External	Internal	Behaviour	Outcome
Franco et al. 2014		Marketing competences	Building networks, long term growth focus	Innovation
Lehman et al. 2014		Experience, knowledge, communication strengths, judgement and decision making abilities	New venture creation and marketing networks	
Fillis 2015		Vision, intuition	Effectuation, networking, opportunity recognition and relationship building	Competitive advantage
Lam and Harker 2015		Business lifecycle stage	Different marketing strategies, respond to environment and enact, foster relationships	Make business possibilities
Miles et al. 2015	Environment creates opportunities		Environmental analysis, doing marketing differently, build relationships and networks	Opportunity exploitation, innovation, resource leveraging
Pascal and Shin 2015		Marketing capabilities	Entrepreneurial orientation	Improved performance
Renton et al. 2015		Experience, skills, competences explorative and flexible	Identification of new customer needs, segments	Proactivity, innovativeness, exploration and exploitation, market innovation, creation of brand values and associations
Whalen et al. 2015	Uncertain environment	Skills, knowledge, organisational freedom	Opportunity creation and recognition	Opportunity exploitation, create value and competitive advantage
Whalen and Akaka 2016	Uncertain, dynamic			Opportunity co-creation (Re) formation of markets

3.4 Conclusion

This chapter has discussed extant literature on EM as portraying a different approach to marketing resulting from interacting with the external environment to identify and exploit opportunities that continually deliver customer value (Morris et al. 2002). A number of connections stemming from EM research have been highlighted, such as the ability to adapt to changing environmental conditions and leverage the marketing network through the owner-manager. The catalyst for EM lies within the competences of the owner-manager of the STB as an EMO is considered as an attitude manifested in behaviours reflecting the seven dimensions of EM (Morris et al. 2002). Despite the valuable contributions of EM research to date, there are calls for research on actual marketing practice in small businesses (Gilmore et al. 2013; Gross et al. 2014) and STBs (Thomas et al. 2011), and linking EM with the exploitation and successful commercialisation of disruptive technologies (Miles et al. 2011; Harrigan et al. 2012).

This research study addresses the gaps in EM research by investigating two issues. Firstly, an EMO is examined in the context of STB owner-managers and secondly, the influence of an EMO on the adoption and use of digital marketing technology. The STB owner-manager is the unit of analysis and the degree to which their marketing orientation is entrepreneurial in its approach is investigated. An entrepreneurial marketing orientation has been proposed as an approach to digital marketing in STBs largely due to its association with successful performance in the small business domain and because of the opportunities that digital marketing technology provides.

The following chapter incorporates the characteristics of an EMO and the aspects of the STB owner-manager's attitude towards digital marketing technology when measuring the degree to which digital marketing technology is adopted and used in STBs. This is done through the development of a conceptual marketing-led framework, presented in the next chapter.

CHAPTER 4

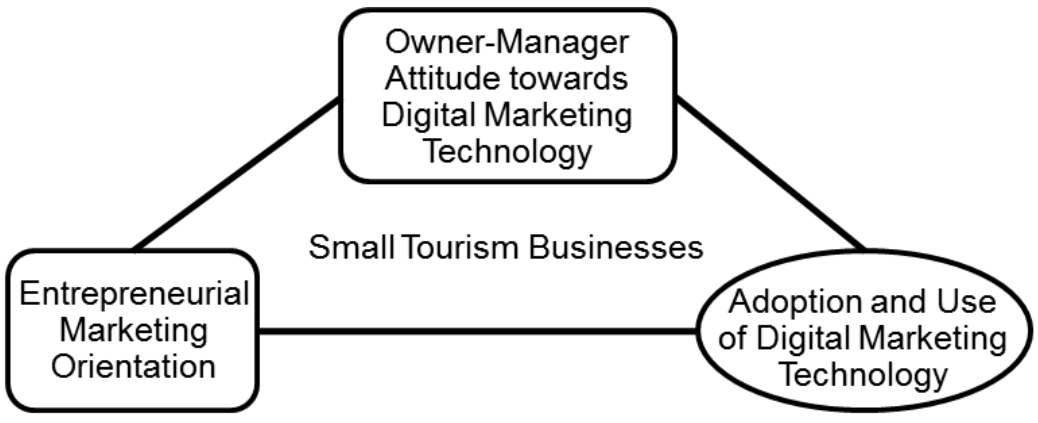
CONCEPTUAL FRAMEWORK

4.1 Introduction

This chapter sets out the study's conceptual framework, which drives its empirical direction and content of the research. Chapter 2 examined small tourism business (STB) characteristics and identified the owner-manager as the unit of analysis. The influences on STB marketing and digital marketing technology adoption and use (AUDT) were discussed in terms of the marketing environment. In addition, the pivotal role of the owner-manager and their attitude towards digital marketing technology (ADT) was explored in terms of shaping the STB marketing approach. In chapter 3, an entrepreneurial marketing orientation (EMO) was explored as a suitable marketing-led basis for the adoption and use of digital marketing technology in STBs.

The aim of this research is to measure the relationship between the three phenomena above (also described as variables or constructs), namely EMO, ADT and AUDT. Specifically, the influence of an EMO on the AUDT by STB owner-managers is estimated and the additional effect of ADT on the relationship between EMO and AUDT (mediation). The relationships between the three phenomena are demonstrated in a simple framework Figure 4.1.

Figure 4.1: Influences on the adoption and use of digital marketing technology in STBs



This simple, multi-dimensional model was developed from academic literature studying small businesses and was informed by the study of entrepreneurial marketing and the adoption and use of information technology and digital technology disciplines (chapters 2 and 3). The literature was used to establish the scope of existing research in the relevant fields; to inform the development of the research questions and hypotheses; to identify any missing or additional variables that may be included in the study; and finally to reference relevant precedents for measuring the selected latent or unobservable variables.

The structure of this chapter first provides a summary of the literature review chapters that lead to the research questions. The hypotheses are then presented with the purpose of integrating the EM and the small business digital technology adoption disciplines, and shedding light on the rationale and contributions of the study. In the final sections, a detailed conceptual framework is presented showing all the variables followed by a summary of the chapter.

4.2 Research gaps

Three EM research gaps have been highlighted as relevant for this study: -

1. the link between an EMO and digital marketing technology adoption and use (AUDT) is not yet fully established
2. there is limited understanding of the entrepreneurial nature of STB owner-managers and how it affects their approach to digital marketing
3. the opportunity to further develop measures for an EMO and use those measures to analyse its influence on digital marketing technology adoption and use in small tourism businesses

Regarding the first research gap (gap 1), a number of authors have identified that the connection between digital technology and EM has not been fully accounted for, if there is one (Morris et al. 2003; Quinton and Harridge-March 2006; Gilmore 2011). Miles at al. (2011) recognised the need for further research on how EM, and therefore an EMO, advances the exploitation of digital marketing technology.

Accordingly, establishing the link between an EMO and AUDT in STBs represents the first contribution of this study.

The next gap (gap 2) relates to the need for further research to examine the extent of entrepreneurship in the STB owner-manager and how that impacts their use of digital marketing technology (Getz and Petersen 2005; Li 2008; Thomas et al. 2011; Franco et al. 2014; Fillis 2015). This is connected to the third gap (gap 3) addressed by this study by proposing a measurement scale for an EMO (Whalen et al. 2015; Morrish et al. 2020), and how it impacts the small business (Lehman et al. 2014) and contributes to EM and tourism research. The measurement scale can be used to quantitatively measure the influence of an EMO on digital marketing (Carson and Coviello 1996; Jones and Rowley 2009; Kurgun et al. 2011; Sullivan Mort et al. 2012; Hills and Hultman 2013; Gross et al. 2014).

Before addressing these research gaps, a literature review was undertaken of three subject areas – entrepreneurial marketing orientation (section 4.3); owner-manager attitude towards digital marketing technology (section 4.4); and the adoption and use of digital marketing technology (section 4.5) to identify the concepts to be measured in the context of the small tourism business.

4.3 Entrepreneurial marketing orientation

The entrepreneur is central to the definition of entrepreneurial marketing (EM) by Hills et al. (2010) as they used the word orientation relating to the spirit of the individual, their passion, their marketing management style and specific business goals (Hills and Hultman 2011; Whalen et al. 2015). Ioniţă's (2012) concise definition introduces the element of environmental uncertainty and a logic that is guided by who the individual is and the means at their disposal - what they know and who they know - as a resource of the entrepreneur.

EM definitions provide examples of the diversity of opinion as to what EM is and at the same time illustrate the similarities (see Table 3.1 on p.55). From these definitions, there is some overlap of EM dimensions for example, resource leveraging and networking, and creativity maybe described in terms of value

creation, innovativeness and opportunity identification. There are characteristics that may not always be applicable for example, launching new ventures and high growth goals. However, the detailed definition of EM by Morris et al. (p.5 2002) containing seven dimensions (proactivity, opportunity focus, customer intensity, innovation focus, attitude to risk, resource leveraging, and value creation) is used in this research with each dimension representing the EMO of the STB owner-manager at a first order level. These seven dimensions form the conceptualisation of EMO at the second order level and as a construct in its own right.

Conceptually, an EMO can be referred to as an intrinsic characteristic within the STB owner-manager. A person's orientation reflects their basic attitude, beliefs, or feelings in relation to a particular subject or issue (Ritter 2005). The seven dimensions of EM are described as the conceptual content of EM as they are the characteristics that are necessary and sufficient to possess an EMO (Mackenzie et al. 2011).

The characteristics that form the basis of an EMO for the owner-manager of the STB are: -

- Customer intensity (CI) - being focussed on the customer
- Innovation focus (IN) - being creative and exploring new products and new ways of working
- Opportunity focus (OF) - looking for new opportunities for the business
- Proactivity (PR) - nurturing and leading change
- Resource leveraging (RL) - exploiting limited resources and business relationships to their maximum effect
- Risk management (RI) – the extent of being open to possible failure
- Value creation (VC) - focussing on ways value can be improved

These characteristics form the basis of the first research question for this study: -

> ***RQ1: Which characteristics of an entrepreneurial marketing orientation influence the components of the adoption and use of digital marketing technology in STBs?***

As a theory, EM is a suitable approach for marketing in uncertain, turbulent times (Morris et al. 2003; Hills et al. 2010; Ioniţă 2012; Hills and Hultman 2013; Fillis 2015; Whalen et al. 2015). Dynamic environments create more opportunities that maybe exploited by those STB owner-managers with an EMO (Miles et al. 2015). Digital marketing technology provides the opportunity for more efficient targeting, and flexible, tactical, expeditious responses to changing environments that can be immediately assessed for success and customer data that may be transformed into knowledge, insights and value, enabling STBs to grow and succeed.

Certain entrepreneurial marketing dimensions are enhanced with a learning orientation (Dew et al. 2008; Shaw and Williams 2010; Ioniţă 2012) that come from wanting to investigate customers and the market. Learning supports innovation by understanding how to adapt to changing conditions (Schindehutte 2008) and learning through experience helps to develop an EMO (Ioniţă 2012). Using the resource of the business and personal network to gain knowledge helps to mitigate risk and enable acceptable risks to be taken (Ioniţă 2012). Therefore, an EMO can be regarded as an attitude reflecting the seven dimensions of EM and can consequently influence the owner-manager's attitude towards digital marketing technology - the basis for the second research question: -

> ***RQ2 - Which characteristics of an entrepreneurial marketing orientation influence the elements of attitude of the small tourism business owner-manager towards digital marketing technology?***

4.4 Owner-manager attitude towards digital marketing technology

The adoption and diffusion of innovation and specifically the adoption of digital marketing technology provides the background to investigate attitude towards digital marketing technology (ADT) by the STB owner-manager. Attitude is a psychological construct that reflects an individual's predisposed state of mind in terms of value and response towards a person, place, thing, or event which in turn influences the individual's thought and action (Perloff 2017). Attitude is an abiding set of beliefs about matters that predispose actions and an individual's perceptions are key (Rogers (2003).

For the quantitative measurement of an individual's attitude towards technology, Fishbein's (1967) three components of attitude - cognition (awareness, knowledge, comprehension, analysis), affect (value, preference, conviction, feelings, emotions, attitudes, evaluation) and behaviour (or conation - action, intention, reasons, personal discovery, transition, transformation, choice) were evaluated alongside a selected number of SB digital technology adoption frameworks (see Table 2.4, p.44).

The constructs used to evaluate attitude towards digital marketing technology are: -

- Awareness of digital marketing technology (AW)
- Knowledge of digital marketing technology (KN)
- Experience of digital marketing technology (EX)
- Perceived value of digital marketing technology (PV)

Awareness of digital marketing technology generated by external sources provides the starting point for the STB owner-manager to investigate and learn more about specific digital marketing technology to ascertain perceived usefulness and ease of use (Davis et al. 1989). Awareness leads to knowledge and informed decision making (Fishbein 1967; Simmons et al. 2008; Simmons et al. 2011; Peltier et al. 2009; Peltier et al. 2012). Experience is recognised as an influence on behaviour (Ajzen 1991) and it is acknowledged as key to digital marketing technology adoption (Wymer and Regan 2005; Simmons et al. 2008; Simmons et al. 2011).

Due to the limited resources that many STBs face, it is understandable, that owner-manager attitudes towards digital marketing technology is grounded in their perception of the benefits for the business (Simmons et al. 2008) – seen largely as pragmatic business solutions (Jones et al. 2014). Perceptions of digital marketing technology also encompass the relative advantage that it may bring to the business as well as the owner-manager's recognising the costs of switching to a different medium for marketing communications (Peltier et al. 2012). Switching costs also reflect the owner-manager's attitude about innovation, by doing things differently and change.

A further research question formed by the direct relationships in the conceptual framework is: -

> ***RQ3 – Which elements of the owner-managers attitude towards digital marketing technology influence the components of the adoption and use of digital marketing technology in small tourism businesses?***

The continuing evolution of digital technology opens up the possibility for entrepreneurial and innovative approaches to marketing in STBs through the resource that digital marketing technology provides (Peltier et al. 2012). Innovative marketing practices in STBs arise from using digital marketing technology to create information that may be transformed into knowledge, insights and value (Harrigan et al. 2012). However, an innovative, different approach to marketing is dependent on the motivation, orientation and attitude of the STB owner-manager as the key decision-maker (Thompson et al. 2013) leading to the final research question as follows: -

> ***RQ4 – What is the mediating effect of the elements of attitude towards digital marketing technology on the relationship between the characteristics of an entrepreneurial marketing orientation and the components of the adoption and use of digital marketing technology in small tourism businesses?***

Research question 4 may also be restated at a higher order level as follows: -

> ***What is the mediating effect of attitude towards digital marketing technology on the relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology in small tourism businesses?***

The four research questions will be addressed by this study based on the proposition that the characteristics of an entrepreneurial marketing orientation are compatible with the opportunities that digital marketing technology provide the STB, and therefore will have a positive influence.

4.5 Adoption and use of digital marketing technology

This study draws from small business literature in considering the owner-manager and their relationship with digital marketing technology (Simmons et al. 2008; Wolcott et al. 2008; Peltier et al. 2012; Thompson et al. 2013; Jones et al. 2014). The possibilities that digital marketing technology provide have been conceptualised in change, innovation and, opportunity creation and recognition (Morris et al. 2003; Quinton and Harridge-March 2006; Jones et al. 2015) - two dimensions of EM. However, the adoption of digital marketing technology is limited in STBs due to a number of factors – difficulty in assessing its effectiveness (Leeflang et al. 2014); lack of knowledge (Thompson et al. 2013) lack of skills (Wolcott et al. 2008; Royle and Laing 2014) as well as the influence of attitudes and perceptions of the owner-managers of STBs.

Adoption and use are terms that are utilised interchangeably in the context of digital technology. Adoption is the cognitive process of consideration and action, and it occurs in stages between individual awareness and final confirmation (Loudon and Della Bitta 1993). Rogers' (2003) definition of the (innovation) adoption process is completed with confirmation occurring when the adoption becomes part of everyday practice. From a practitioner perspective, it is how the adopted digital marketing technology is used to innovate marketing practice and integrated into marketing strategy that are key (Harrigan et al. 2012a). The effective implementation and use of digital marketing technology starts with perceived benefits for the business, but 'how' and 'why' it is used are fundamental to achieving these benefits (Jones et al. 2003). In practice, the process of adopting digital marketing technology is not holistic and whilst digital marketing applications are adopted, their use and integration is often limited (Chaffey and Patron 2012; Taiminen and Karjaluoto 2015).

Investment in digital marketing technology may be categorised in terms of money invested in systems, tools and applications (although many are free of charge) as well as time spent using them and investing in people with relevant skills (Chaffey and Patron (2012). Investment for the majority of STBs requires the ability to assess the rate of return and effectiveness of digital marketing and is a challenge

for most owner-managers (Leeflang et al. 2014). Consequently, risk averse managers are more likely to invest less in innovations such as digital marketing technology. Therefore, innovations that do occur in small businesses are more likely to be low in value (Harrigan et al. 2012b) and in number, and those that are developed, are minor and incremental (Thompson et al. 2013). The lack of guidance and benchmarks in the dynamic digital world is another reason for low investment in digital marketing technology leading to an inability to future proof the business (Royle and Laing 2014).

One outcome from digital marketing technology is the potential to increase the quantity and quality of customer data. High performing businesses are distinguished by their ability to integrate data on what consumers are doing with knowledge of why they are doing it, which yields new insights into consumers' needs and how best to meet them (de Swaan Arons et al. 2014). Businesses that are sophisticated in their use of customer data (that results from digital marketing activity) are more likely to grow faster (de Swaan Arons et al. 2014).

The digital marketing applications that are adopted and used, the level of investment in digital marketing technology and how it is used in terms of integration into the marketing strategy form the adoption and use of digital marketing technology construct (AUDT) and are represented by the following constructs: -

- Digital communication channels, paid for digital advertising and analysis channels combined as a group of digital applications adopted and used for marketing communication (APPS)
- Amount of money and time invested in digital marketing technology (INV)
- Digital customer data storage and integration (DSI)
- Customer data analysis (CDA)
- Decision making enabled by digital marketing technology (DM)

Integrating digital marketing technology into a marketing programme requires behavioural change, moving away from the ‘bolt-on’ and piecemeal digital marketing approach employed by many firms (Royle and Laing 2014). Whilst

from a business user perspective, digital marketing technology is getting easier to use and is more intuitive, analytics are not being fully utilised in the STB. Digital marketing technology may make customer information more accessible, yet many small businesses struggle to integrate customer data into existing marketing practice (Harrigan et al. 2012b; Jones et al. 2014) because large volumes of digital data are unwieldy and difficult to manage. Customer data generated from multiple digital communication channels are not being integrated within the STB to provide a complete view of the customer from the data available (Chaffey and Patron 2012; Vatash 2018), limiting the ability to create value from knowing and understanding the customer. Research has highlighted the need to investigate the marketing decision making process enabled by digital marketing technology in STBs as the key to organisational survival and a sustainable competitive strategy may lie in the ability of a firm to undergo strategic change, so that the marketing function may respond to digital marketing technology related opportunities (Martin and Matlay 2003).

4.6 Research hypotheses

This study investigates the influence of an EMO on the AUDT in STBs and this contribution is expressed by the first hypothesis: -

> Hypothesis 1: The characteristics of an entrepreneurial marketing orientation have a direct and positive influence on the components that represent the adoption and use of digital marketing technology in small tourism businesses.

Given the conceptual basis of the EM construct, it is key that this study establishes which characteristics of an EMO influence the adoption and use of digital marketing technology by testing each EMO characteristic individually, therefore hypothesis 1 may be rewritten as follows: -

> Hypothesis 1: The characteristics of an EMO - (a) customer intensity, (b) innovation focus, (c) proactivity, (d) opportunity focus, (e) resource leveraging, (f) risk management and (g) value creation, have a direct and positive influence on the components of AUDT - (i) the

number of digital marketing applications adopted and used; (ii) investment in digital marketing technology; (iii) customer data storage and integration; (iv) customer data analysis; and (v) marketing decision making in STBs.

A marketing and customer orientation have been found to be relevant when considering the relationship of the SB owner-manager with digital marketing technology (Morris et al. 2002; Fillis and Wagner 2005; Elliott and Boshoff 2007; Jones and Rowley 2011; Jones and Suoranta 2013; Alford and Page 2015). This study also considers the orientation of the STB owner-manager, and specifically the influence of an EMO on the attitude towards digital marketing technology of the STB owner-manager and leads to the second hypothesis: -

Hypothesis 2: the characteristics of an EMO - (a) value creation, (b) customer intensity, (c) opportunity focus, (d) innovation focus, (e) proactivity, (f) resource leveraging, and (g) risk management - have a direct and positive influence on the elements of the STB owner-manager's attitude towards digital marketing technology, namely (a) awareness, (b) knowledge, (c) experience, and (d) perceived value of digital marketing technology.

Attitude towards digital marketing technology can manifest itself on a positive to negative disposition continuum. The owner-manager's attitude towards digital marketing technology, and in particular their perceived value of it, has been found to be a significant influence on whether to adopt and use digital marketing technology or not in small businesses (for example, Barba-Sanchez et al. 2007; Simmons et al. 2008; Wolcott et al. 2008; Peltier et al. 2012; Jones et al. 2014). Consequently, this study acknowledges the significance of attitude in those findings and specifically seeks to establish the influence within STBs and forms the third hypothesis: -

Hypothesis 3: the elements of the STBs owner-manager's attitude towards digital marketing technology, namely (a) awareness, (b) knowledge, (c) experience, and (d) perceived value have a direct and positive

effect on the components of the adoption and use of digital marketing technology (the number of digital marketing applications adopted and used; investment in digital marketing technology; customer data storage and integration; customer data analysis; and marketing decision making) in STBs

As the main purpose of the thesis is to examine the influence of an EMO on AUDT, it also conceptualises the mediating effect of attitude towards digital marketing technology in the relationship between an EMO and the AUDT in STBs. The conceptual basis for mediation is to explain why a relationship between two constructs exists (Hair et al. 2014). As a statistical method, mediation helps to quantify the extent to which one phenomenon affects another (Hayes 2013). Specifically, in this study, the phenomenon is attitude towards digital marketing technology and its effect on the relationship between an owner-manager's EMO and the adoption and use of digital marketing technology in STBs, providing the final hypothesis as follows: -

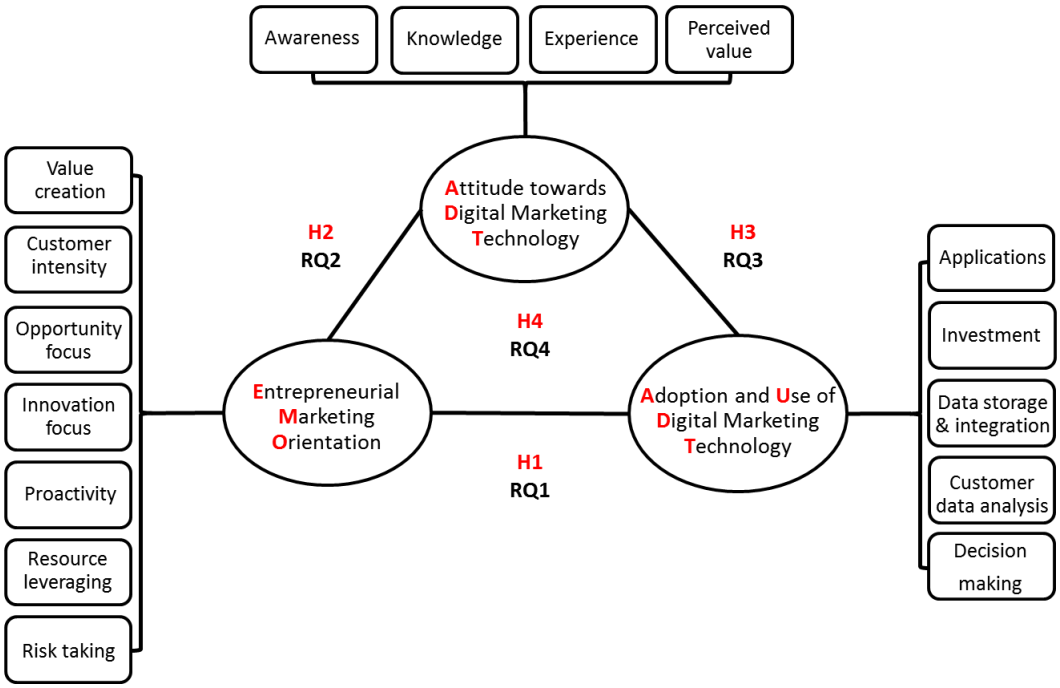
Hypothesis 4: the relationship between an EMO and AUDT in STBs is mediated by the owner-manager's attitude towards digital marketing technology at both a first and second order construct level.

It is anticipated that the characteristics of an entrepreneurial marketing orientation will have a positive influence on the components of adoption and use of digital marketing technology. It is also anticipated that the characteristics of an entrepreneurial marketing orientation will have a positive influence on the elements of the STB owner-manager's attitude towards digital marketing technology. Finally, it is expected that the elements of the STB owner-manager's attitude towards digital marketing technology will have a mediating effect on the relationship between the characteristics of an entrepreneurial marketing orientation and the components of the adoption and use of digital marketing technology.

The research study will estimate the weighting of the influence of the direct and indirect relationships between EMO and ADT on AUDT in STBs at a lower

(rectangular) and higher (ellipse) level in an analytical model based on the conceptual framework in Figure 4.2.

Figure 4.2: Conceptual framework with EMO, ADT and AUDT components



4.6 Conclusion

The purpose of this chapter was to identify the specific components of the three constructs of an EMO, ADT and AUDT after reviewing the small business and small tourism business literature and to specify the relevant research gaps and hypotheses. The research questions and conceptual framework lay the foundations for the empirical direction of the study, continued in the next chapter where the methodology is discussed, and the detail of the research method presented.

CHAPTER 5

METHODOLOGY

5.1 Introduction

The purpose of this chapter is to provide an outline of the methodology that underpins the research project and the rationale for the research design. It discusses the philosophical view and the particular aspects of quantitative research pertinent to this study. This chapter explains the choice of research method that ultimately generated the data in order to answer the research questions developed in the literature review chapters 2 and 3 and the conceptual framework (chapter 4). The chosen analytical process is reported, followed by the development of the analysis model. The chapter closes with a description of how the data was collected and processed for analysis.

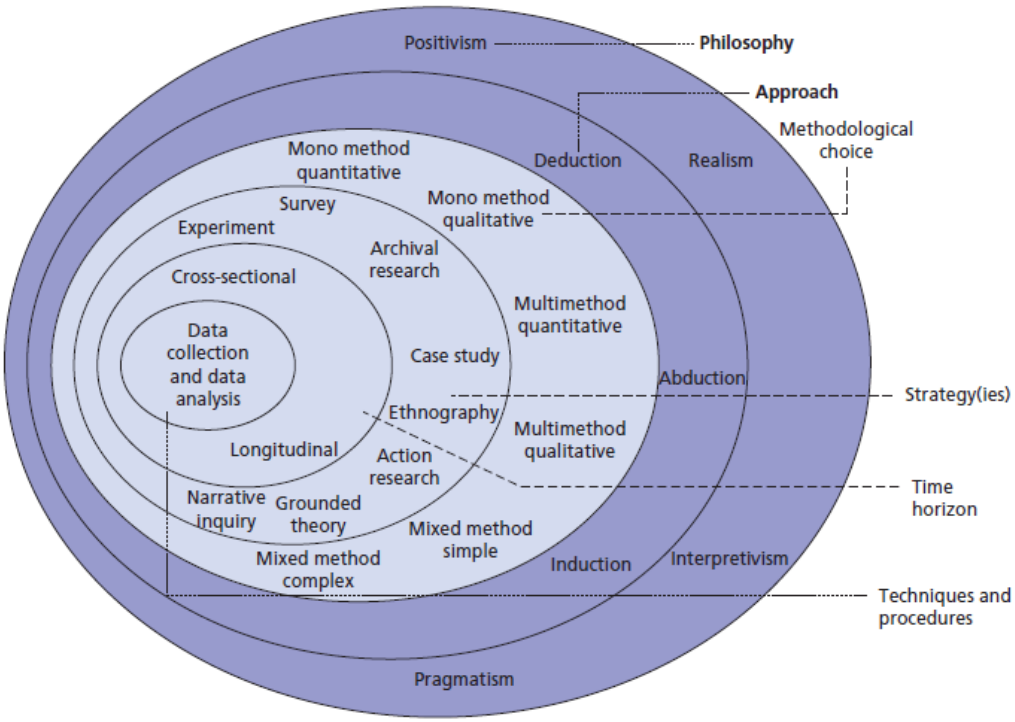
5.2 Research Methodology

5.2.1 Approaches to research

Research methodology is defined as the overall approach used to investigate a specific phenomenon and the research method is the particular procedure used for data collection, analysis etc. (Easterby-Smith et al. 2008). The aim of this research is to contribute to knowledge by estimating the influence of an entrepreneurial marketing orientation (EMO) on digital marketing technology adoption and use (AUDT) in small tourism businesses (STBs).

A succinct illustration of alternative research approaches is presented in the layers of the "research onion" (Saunders et al. 2009, p.108) upon which Figure 5.1 is based. This outer ring of the figure identifies the possible philosophical worldview assumptions of the researcher. The inner rings show the related strategies of enquiry, and the specific methods or procedure of the research. Thus, each layer of the onion represents a stage of the research process from the philosophy of the research through to the actual data collection and analysis.

Figure 5.1: The research onion



Based on Saunders et al. 2009

The research methodology is expressed in the form of epistemological (the darker outer layers of the onion) and ontological considerations that embody the research methodology and the different research methods (the inner, lighter layers of the onion). Epistemology is the branch of philosophy concerned with the theory of knowledge guiding how we interpret what is observed in comparison to the natural sciences and include positivism and interpretivism. Ontology in the social sciences relates to the question of objective entities that have a reality external to social actors that may be objectively measured, or whether they are constructed by the perceptions and actions of social actors. These different perspectives are referred to as objectivism and constructivism and are illustrations of the organisation and culture respectively (Bryman and Bell 2015). When it comes to the research philosophy, the distinction between quantitative and qualitative research as a strategy helps to explain the differences in the methodological issues (Table 5.1).

Table 5.1: Principal differences between qualitative and quantitative research

	Quantitative	**Qualitative**
The role of theory	Deductive, testing theory	Inductive; generating theory
Epistemology	Positivism	Interpretivism
Ontology	Objectivism	Constructivism

Based on Bryman and Bell (2015)

5.2.2 Research purpose and philosophy

There are three ways of categorising research according to its purpose – namely exploratory, descriptive and causal. Exploratory research aims to discover new insights into existing phenomena and helps in understanding ambiguous situations – it often raises questions that require further research. Descriptive research is designed to focus on specific issues and answer who, what, when, where and how questions relating to people, groups, organisations, objects and environments (Zikmund et al. 2013). The main purpose of causal research is to explain the relationship between two or more variables (Saunders et al. 2009).

Having decided on a research purpose, the process of research requires the adoption of the most appropriate methodology to reflect the nature of the investigation. Consequently, an understanding of the methodologies and their philosophical roots in the nature of reality (ontology) and how to acquire knowledge of that reality (epistemology) is necessary to ensure the enquiry is rigourous, robust and stands up to scrutiny. Research philosophy applies to the development of knowledge and the nature of that knowledge (Saunders et al. 2009), according to the view of the researcher and guides their chosen approach i.e. formulation of research approach and selection of research method (Hesse-Biber and Leavy, 2011; Bryman and Bell, 2015). The research philosophy provides the researcher with the rationale and justification for their chosen approach and the quality standards against which the research may be evaluated.

The first principle of the nature of being is dealt with by ontology as a major branch of metaphysics in philosophy (Ritter 2005). In the social sciences, there are considerable differences between the two main ontological points of view. The first view is that the social world exists and can be objectively measured. The alternative, second view, is that the social world is constructed by the perception and actions of people within it (Saunders et al. 2015). Applying this view to the social sciences and in particular to management study, Bryman and Bell (2015) have argued organisational culture is not an external reality but an emergent one that is continuously constructed through people. There is also a social constructivist perspective that recognises the existence of a reality that precedes the

participants role in it (Becker 1982). This research project objectively measures three social constructs (EMO, attitude towards digital marketing technology (ADT) and AUDT) and acknowledges the reality of their existence, and at the same time, recognises that the participants have individual perceptions and interactions with that reality.

As this study is concerned with measuring the EMO influences on the adoption and use of digital marketing technology in STBs, positivism provides a structured approach that challenges knowledge and, at the same time, recognises the uncertainty of studying human activity and behaviour (Creswell 2009). Whilst it is known as the scientific method, positivism challenges the traditional notion of absolute truth when studying human behaviour (Creswell 2009). Positivism emphasises describing human behaviour as opposed to understanding human behaviour (interpretivism) and tests theory. The theory focus in this research project relates to the influence of an EMO on the use of digital marketing technology (AUDT). STB owner-managers, the participants in the research, supply empirical evidence of this influence so that the relationships among the variables of the three constructs (EMO, attitude towards digital marketing technology – ADT - and AUDT) may be measured to answer the research questions and hypotheses.

5.2.3 Research approach

Three main research approaches demonstrate the relationship between theory and research, and these are shown in the next layer of the research onion in Figure 5.1 – deduction, induction and abduction.

The deductive approach involves the creation of hypotheses that are based on theoretical understanding and then subjecting the hypotheses to empirical scrutiny (Bryman and Bell 2015). There is a focus on testing established theory using hypotheses based in the norms and behaviours from natural science and positivism. Hypotheses must be translated into operational terms in order to specify and consequently measure their concepts. Business and management scholars whose

philosophical positioning identifies with positivism usually adopt deduction and it is widely associated with quantitative research designs (Bryman and Bell 2015).

The purpose of induction is to understand the nature of the social reality by collecting and analysing the data. Theory generation is the outcome of this research methodology. Induction involves the inference of generalisations that come from observation or findings and allows for new or different explanations of social reality. Induction relates to the context in which events occur (Saunders et al. 2009), accordingly, smaller samples are appropriate and consequently induction is usually associated with qualitative research design.

Abduction combines both deduction and induction approaches, in that it moves from data to theory and theory to data (Suddaby 2006). Abduction may begin with an initial observation that is then further examined in order to explain that occurrence. Research may adopt a qualitative or quantitative design or a mixture of both, depending on the nature of the phenomena in question.

To summarise, this research recognises the existence of an objective reality where the behaviour of social actors contributes to the reality and the epistemological position is aligned with positivism. In this study, behaviour is measured using a structured approach that provides a platform for future research to continue the investigation into the relationship between an EMO and the AUDT. In addition, the purpose of the study is to deduce the outcome from the reasons for behaviour through research questions and a model of the conceptual framework, presented in chapter 4, which is grounded in the extant literature.

One way that theory may be tested is through the structured collection of quantitative data that provides summary information on multiple characteristics, relationships and demonstrates causality (Hair et al. 2011). As this study aims to explore the relationships between variables, it requires objective measurement of clearly defined concepts (Hair et al. 2011) and therefore adopts a positivist philosophy and the specific quality criteria for robust quantitative research is discussed next in order to understand the specific research design for this study.

5.2.4 Quantitative research design

As discussed above, research design is influenced by the ontological and epistemological position taken by the researcher, and, the deductive, inductive or abductive research approach. In addition, the key consideration for design is the aim of the study and its research questions.

Quantitative research can be conducted through case studies, structured interviews, and questionnaire surveys – the data collected are appropriate for descriptions or explanations of the phenomenon. Descriptive studies aim to produce an accurate picture of events, people or situations (Saunders et al. 2015) and usually address research questions beginning with 'who', 'where', 'what' and 'when'. The purpose of causal studies is to discover the extent to which a phenomenon is occurring, and addresses 'how', 'what' and 'to what extent' questions (Saunders et al. 2015). The stages of quantitative research design are illustrated through the deductive and explanatory research process and the steps of quantitative research and there are consistencies across all three descriptions (Table 5.2).

Table 5.2: Quantitative research design stages

Deduction Process	**Explanatory Research Process**	**Quantitative Research**
Theory	State aim, objectives, questions, and identify variables	Elaborate theory
Hypotheses	State hypotheses Determine design structure Design instruments and classify operational definitions Identify population and sample Select statistical test for hypothesis	Devise Hypotheses Select research design Devise measures of concepts Select research sites and respondents
Data Collection	Carry out plan and collect data	Administer and collect data Process data
Findings	Analyse data	Analyse data
Confirm or Reject	Draw conclusions	Develop findings and conclusions Write up findings and conclusions
Revision of Theory	Evaluate process	

Bryman and Bell 2015, Black 1999, Bryman and Bell 2015

As the label suggests, quantitative research methods involve the quantification of data through collection and analysis. Quantitative research examines the relationships between variables that are measured numerically and compared using statistical analysis (Saunders et al. 2015), in order to present generalisable findings of an objective reality.

The nature of the research questions determined the choice of a quantitative research design for this study as being the most appropriate research strategy to measure the relationships between variables through a cross-sectional survey. A cross-sectional research design requires the collection of data of more than one case at a single point in time, to generate quantifiable data on two or more variables in order to demonstrate patterns of association rather than absolute findings (Bryman and Bell 2015).

5.2.5 Quantitative research considerations

Quantitative research has been dominant in the field of business enquiry, but since the mid-1980s, qualitative research has become more influential (Bryman and Bell 2015). As previously stated, quantitative research requires the collection of data that may be expressed in numerical terms. However, as a strategy it cannot entirely quantify all aspects of the social world. One criticism of quantitative research stems from the difference between people and social institutions and the natural world. Schutz (1962, p.59) referred to the 'thought objects' that determine behaviour and that people interpret the world differently and consequently act differently, the same cannot be said of, for example, the molecules and atoms of the natural world. Another criticism is the inability to avoid assumptions and interpretations of the researcher when measuring concepts. In addition, the interpretation of questions by respondents can vary at different times and between responders. There are some ways in which these criticisms may be addressed through quality controls and these are discussed in the next section.

5.2.5.1 Quantitative research quality criteria

There are a few key considerations with quantitative research – namely, quality, concept measurement, causality and generalisation. These are discussed in turn

starting with the three main criteria used to establish research reliability; validity; and the ability to replicate results and findings.

To be reliable, the results of a research study must be repeatable and consequently the measures that are devised for business concepts are consistent. Reliability is demonstrated through stability and internal reliability (Bryman and Bell 2015). Stability requires measurement to endure over time so when it is repeated there will be minimal variation in results and internal reliability relates to consistency between indicators (Bryman and Bell 2015).

Validity is concerned with the integrity of the conclusions that may be drawn from quantitative research and, as such, concerns measurement validity (or construct validity) and internal validity where conclusions about a causal relationship are robust. External validity refers to the results of a study being generalised beyond the context of the specific research and requires a representative sample of the population (Bryman and Bell 2015). In other words, for example, a questionnaire being suitable for individuals other than those that initially responded as part of the research sample. That is done with probability sampling to generate a representative sample of the population.

The key to replicability is the detailed procedure for selecting respondents, designing the measurement of the concepts, the administration of the questionnaire and the analysis of the data.

Concepts are organised ideas and observations (Bulmer 1984) and, when they are features of quantitative research, they must be measured to become dependent or independent variables. Concepts may explain a specific phenomenon or may help explain variations such as organisational performance. By applying a measurement instrument to a concept, consistent results (but not the same results) occur that are independent of the person who administers the measurement. Finally, measurement enables a more precise estimate of the degree of relationship between concepts through correlation analysis. In other words, measurement validity is the extent to which an indicator (or indicators) truly represent the concept being measured.

Indicators are necessary to measure concepts and can be generated through self-completion questionnaires or other data collection methods. A key consideration for social science research is to ascertain how many measurement items are necessary to accurately represent the concept. Multiple indicators allow for finer distinctions and avoid generalisation for complex concepts.

Most quantitative research is concerned with attempting explanations, which results in examining cause and effect through the relationship between a dependent variable (what is explained) and the influence of independent variables on the dependent variable. With cross-sectional research, techniques such as internal validity standards are used that allow causal inferences to be made.

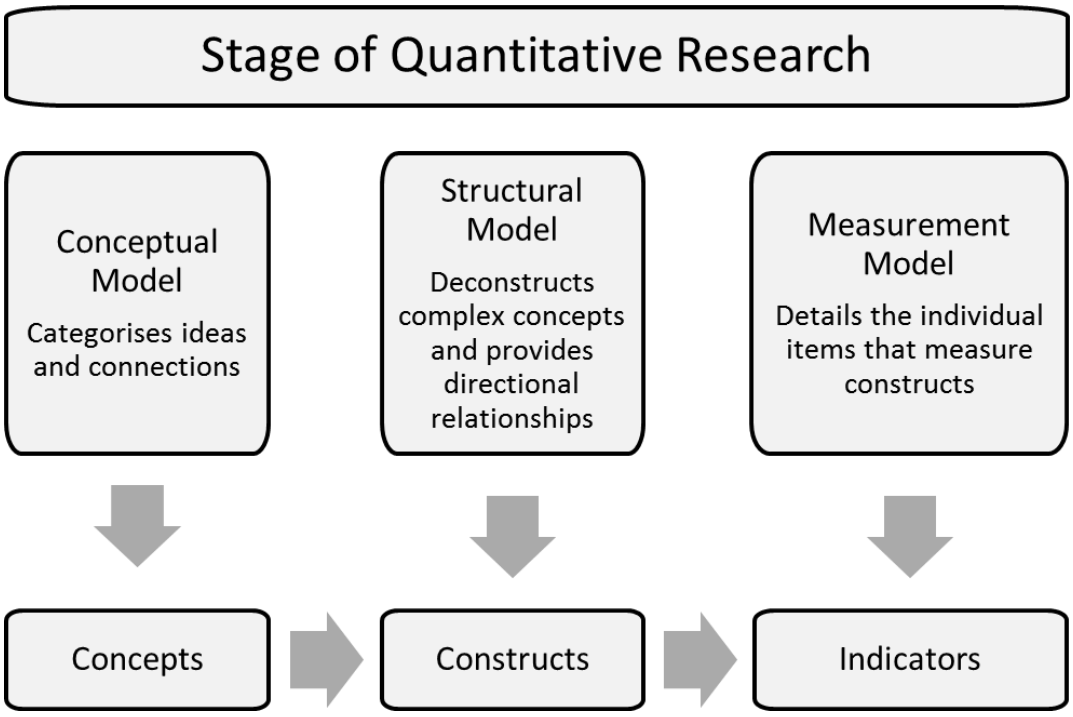
5.2.5.2 Research concept definition and measurement

Concepts in quantitative research are defined as the elements of the social world that have commonality and potential significance. Bulmer (1984) described them as the categorisation of ideas and observation and are derived from literature – they are the building blocks of theory (Bryman and Bell 2015). The process of conceptualisation identifies the constructs (also known as latent or unobserved variables) and their indicators for research; it identifies the relationships between the constructs and visually represents the theoretical basis of the relationships (Hair et al. 2011).

For a concept to be used in quantitative research, it must be measured or be represented by a score for measurement. However, concepts in business research are rarely simple and measured through one indicator. Concepts are often made up of multiple characteristics and require several questions or statements for accurate representation, and, as such, they are labelled constructs (Hair et al. 2011). A construct may be derived from a number of sub-dimensions and therefore, be described at higher levels (second order construct) or lower levels (first order constructs). Consequently, precise construct definitions are essential at any level for accurate measurement.

An indicator is measured directly, and constructs are measured through indicators and therefore, have a greater level of abstraction (Hair et al. 2011). Independent variables or constructs represent concepts that explore a certain aspect of the social world and dependent variables or constructs can stand for phenomena to be explained. There are a number of reasons where measurement can help explain constructs – to delineate fine differences between individuals; for consistent benchmarking over time and in separate studies; and accurate estimates of the degree of relationship between concepts through correlation analysis (Bryman and Bell 2015). Concepts, constructs and indicators are labelled according to the stage of the research in this study and are shown in Figure 5.2.

Figure 5.2: Quantitative research models and their components



Constructs are measured and represented through indicators that may be generated from a wide variety of sources and as discussed earlier, a key consideration is the number of indicators required to sufficiently characterise the construct. Multiple indicators ameliorate the problems of using a single indicator and address issues such as misunderstanding, being too general (particularly for complex constructs) and allow for finer distinctions between cases or individuals. It is the constructs from the conceptual model and the indicators (or measurement items) from the

measurement model that form the basis of the questionnaire survey. The first and second order constructs for this study are defined in the data analysis Section (5.3) and the indicators used in the development of the analysis model are in Section 5.4.

5.3 Data analysis

5.3.1 Background to data analysis

An important consideration at the beginning of any research project is how the quantitative data that is generated will be analysed. Statistical data analysis methods are used to convert raw data into information and confirm or do not confirm research findings. The use of specific analysis tools varies according to the research problem that is to be addressed. However, there are limitations. Firstly, statistical techniques must be appropriate to the specific variables created through the research and secondly, they are limited according to the size and nature of the sample being researched (Bryman and Bell 2015).

There are methods for analysing single variables at a time (univariate analysis), relationships between two variables (bivariate analysis) and relationships between three or more variables (multivariate analysis). Univariate and bivariate analysis provide researchers with the opportunity to understand data and relationships. However, research trends in the social science discipline are becoming increasingly complex and thus require advanced multivariate data analysis methods. Examples of first and second-generation multivariate analysis methods are in Table 5.3.

Table 5.3: Multivariate statistical analysis methods

	Exploratory Research	**Confirmatory Research**
First generation techniques	• Cluster analysis • Exploratory factor analysis • Multidimensional scaling	• Analysis of variance • Logistic regression • Multiple regression • Confirmatory factor analysis
Second generation techniques (e.g. SEM)	• Partial least squares structural equation modelling (PLS-SEM)	• Covariance based structural equation modelling (CB-SEM)

Hair et al. 2017

Multivariate analysis methods can be described as either exploratory or confirmatory. Exploratory multivariate analysis identifies relationships or data

patterns when there is little or no prior knowledge on the relationships between variables. Confirmatory multivariate analysis either confirms or does not confirm existing theories and concepts through hypothesis testing (Hair et al. 2017). However, it is worth noting that confirmatory multivariate analysis may be used to explore the impact of additional variables in extending the concept that is being researched. Likewise, exploratory multivariate analysis often includes a priori knowledge on the composite factors to extract from the data (Sarstedt and Mooi 2014).

The development of technology has had a significant impact on statistical analysis tools through user-friendly interfaces and technology-delivered results that may be processed with speed and efficiency. In the 1980s, the quantitative research landscape was dominated by multivariate techniques such as factor analysis and regression analysis, categorised as first-generation methods (Hair et al. (2017). However, since the 1990s there has been a rapid expansion in certain research disciplines of second generation methods including structural equation modelling (SEM) that can be used in both confirmatory mode (for the purposes of theory-testing) and in exploratory mode (for theory-building) in the marketing, strategic management and psychology academic disciplines (Ali et al. 2018a).

Structural Equation Modelling (SEM) is judged a suitable analysis technique for this study as the lower or first order model is complex with many latent variables and many relationships between them. By combining aspects of factor analysis and regression analysis, SEM enables the simultaneous examination of relationships among measured variables (first order constructs) and latent (unobservable) constructs using a range of indicators in the measurement model, as well as evaluating the relationships between latent constructs in the structural model (Hair et al. 2017). In SEM analysis, two types of constructs are used - endogenous constructs (equivalent to dependent variables – AUDT in this study) and exogenous constructs (the independent variables of EMO and ADT).

5.3.2 Structural equation modelling

In terms of statistical analysis, SEM encompasses a variety of approaches such as covariance-based SEM (CB-SEM), partial least squares SEM (PLS-SEM) and generalised structured component analysis (Ali et al. 2018b). SEM analyses theory-based variables by using both confirmatory factor analysis and linear regression models (Hair et al. 2014). When correctly applied, SEM provides advantages over first generation techniques - namely the ability to model relationships between multiple variables; create unobservable latent variables through composite scores; account for errors in the measurement of observed variables; and test theoretical assumptions with empirical data (Chin 1998). These advantages however, come with higher levels of complexity that can create results and conclusions that are flawed or even invalid if the appropriate conditions and assumptions for the appropriate use of the technique are not met (Chin 1998; Hair et al. 2012a). Two examples are the use of formative or reflective indicators to measure a latent variable or construct and the sequence of the analysis of the second order factor models (discussed in Section 5.4).

As a second-generation multivariate technique, SEM has the ability to analyse structural relationships between unobservable constructs represented by multiple variables whilst at the same time account for measurement error (Ali et al. 2018b). As a result, SEM has seen its popularity increase as an analysis technique since the turn of the century, and has gained in popularity in the tourism and hospitality research field (Ali et al. 2018a), in particular the covariance based SEM (CB-SEM) approach.

SEM can handle composite variables, indicators, measurement scales, coding and data distribution amongst other considerations. Firstly, the second order constructs of EMO, ADT and the AUDT may be measured as composite variables through scores – a linear combination of variables (e.g. statements in a survey) that calculates weights and multiplies weights with the associated data observations. Secondly, the measurement process is one of assigning numbers that accurately represent a variable based on a set of rules (see Section 5.6 Data processing). This can occur even if the variable is abstract, complex or not directly observable. The

indicators of a first order construct are measured and combined in a scale to form a composite score. The idea being that the composite score will be more accurate when using several indicators to measure a single construct by representing all the different aspects of the construct. This involves reducing measurement error, which is the difference between the true value of a variable and the value obtained by measurement (Hair et al. 2017). Examples of measurement error occur through poorly worded statements or questions, misunderstanding scaling approach, and incorrect application of statistical method. Thirdly, SEM can deal with measurement scales made up of nominal, ordinal, interval and ratio measures. Fourthly, coding determines when and how various types of scales may be used and in the case of Likert scales, as used in this study, if well presented, they can approximate an interval-level measurement and the corresponding variables can be used in SEM. Finally, normal and non-normal data distributions only need to be distinguished when using SEM. Normal distributions are required for CB-SEM, but this is not necessary for PLS-SEM.

As the use of SEM has increased so has the incorrect use of the SEM technique due to the lack of understanding of the assumptions and the requirements of the technique on the part of researchers and, as a result, the full benefits of SEM have not been realised (Hair et al. 2012b; Ali et al. 2018b). Therefore, the choice of the correct SEM is technique is critical according to the research question and relevant theoretical knowledge (Ali et al. 2018b).

SEM is used to either explore or confirm theory. Exploratory modelling involves developing theory while confirmatory modelling tests theory. There are two types of SEM (Table 5.3, p.104) - covariance (to confirm or reject theories) or variance based (to develop theories). PLS-SEM is an alternative approach to CB-SEM that is considered for use in situations where theory is less developed, particularly if the primary objective of applying structural modelling is prediction and explanation of target constructs.

The PLS-SEM approach is similar to regression, but it models measurement paths and structural paths at the same time (Wiedmann et al. 2011). PLS-SEM emphasises the causal explanation of relationships between constructs (Wiedmann

et al. 2011) and this is done through the explanation of variance in the endogenous construct (adoption and use of digital marketing technology) through a path model. PLS-SEM estimates path model relationships (coefficients) that maximise the R^2 values of the endogenous constructs (dependent variables) in order to achieve objectives relating to prediction. PLS-SEM is subsequently preferred for theory development to explain constructs and is considered as a variance-based approach to SEM.

A comparative study of both CB-SEM and PLS-SEM in tourism and hospitality research from 2001 to 2014 (815 studies) found the most common application of SEM amongst tourism and hospitality researchers has been CB-SEM (Ali et al. 2018a). More recently, both analysis methods have been used to investigate entrepreneurial marketing as a strategic response to environmental change and turbulence (Peterson 2020). There has been a significant increase in the use of PLS-SEM, in particular to test complex models investigating mediating effects (Ali et al. 2018a). As a theory confirming approach, this dominance of CB-SEM has restricted the advancement of theory in the tourism and hospitality discipline and subsequently PLS-SEM is being recognised as a way to develop theory and examine predictive models, however the application for prediction purposes was very low (Ali et al. 2018a). As this study aims to explore the influence of an EMO on the AUDT in STBs, whilst at the same time considering the mediating effect of ADT, PLS-SEM is the chosen analysis technique.

5.3.3 Partial least squares structural equation modelling

The partial least squares structural equation modelling (PLS-SEM) algorithm originated from work by Wold (1975) that was later extended by Lohmöller (1989), Bentler and Huang (2014), Dijkstra (2014) and Dijkstra and Henseler (2015). PLS-SEM, as a multivariate statistical analysis technique, provides the means to empirically analyse the relationships between the three elements of the conceptual model in Figure 4.2 (p.93) and to assess their significance.

PLS-SEM is commonly used in marketing research (Hair et al. 2012b) as it enables complete theories and concepts to be analysed (Rigdon 1998) due to its ability to

measure composite variables and test relationships on a theoretical level. Predicting hypothesised relationships is the focus of PLS-SEM as an analysis method because it maximises the explained variance in endogenous (outcome or dependent) variables, which makes it particularly suitable for studies in marketing on competitive advantage and determinants of success (Hair et al. 2017). Indeed, PLS-SEM path modelling has been recommended for examining attitudes and behaviours in large complex models required (Anderson and Swaminathan 2011).

PLS-SEM is the chosen method of analysis for this research as its main purpose is to develop theory by exploring the relationships between EMO, ADT and AUDT. Furthermore, PLS-SEM has a number of characteristics that suit this specific analysis from a data, modelling, algorithm and model evaluation perspective. Regarding data, PLS-SEM achieves high levels of statistical power despite small sample sizes. PLS-SEM does not make any assumptions relating to the distribution of the data (it is a non-parametric method) and PLS-SEM provides robust results regardless of missing values as long as they are below reasonable levels - less than 15% on any construct (Hair et al. 2017). From a modelling perspective, constructs can be measured with single or multiple indicators and relationships between constructs can be reflective or formative. PLS-SEM can manage complex models with many constructs and structural model relationships. The PLS-SEM algorithm deals with constructs as proxies of the latent variable being researched and is represented by composite variables which can then be used for predictive purposes.

The measurement model has different reliability and validity assessment for reflective and formative measurement models and can predict mediating effects as an additional form of analysis. The analysis model contains 16 first order constructs and uses the means of power analyses to determine minimum sample size based on the element or elements of the model with the largest numbers of predictors (Hair et al. 2017). In this case, the R^2 values of 0.10 for significance levels between 5% and 10% are met, assuming the level of statistical power of 80% (proposed by Cohen 1992) with 157 cases in the sample (see Section 5.5.8, p.145). SmartPLS was the chosen programme to build the analysis model and run

the PLS-SEM analysis and this study uses SmartPLS reporting standards and guidelines provided by Hair et al. (2017).

5.3.3.1 Path model

Path models are used in PLS-SEM to illustrate the relationships between the constructs and the hypotheses that are being tested. Path models are derived from theory, and in PLS-SEM, theory is defined as "a set of systematically related hypotheses developed following the scientific method that can be used to explain and predict outcomes, and can be tested empirically" (Hair et al. 2017, p.329). The key to the path model is the direction of the arrows that represent causality and there are two components of a PLS-SEM path model – the structural model and the measurement model. The structural model is analysed through testing path coefficients of the relationships between constructs; and the measurement model that is evaluated by testing reliability and validity of the indicators that measure the constructs.

5.3.3.2 Structural model

The first element, the structural model (or inner model), consists of the constructs and the relationships, or paths, between them that test coefficients. In PLS-SEM, the independent variable is known as an exogenous latent construct, and the dependent variable is the endogenous latent construct (this term also applies to variables that are both independent and dependent).

The structural model contains the constructs that are defined at different levels of abstraction (Hair et al. 2017) and is tested by path coefficients between constructs (Matzler and Renzel 2006). The constructs maybe summarised into the hierarchical component model for a parsimonious modelling approach that reduces the model complexity. The sequence of the constructs in the structural model is based on the hypothesis that an EMO positively influences the adoption and use of digital marketing technology (AUDT). The structural model is then further tested by measuring the effect of the mediating construct, ADT.

5.3.3.3 Measurement model

The PLS-SEM path model also incorporates the measurement model (or outer model) that contains the measurement items (or indicators) of the constructs within the structural model. The measurement model demonstrates how the constructs are measured through indicators that are tested for validity and reliability. The indicators must accurately reflect the essence of the constructs if the relationships between the constructs are to be measured correctly and hypotheses tested. It is also necessary that the nature of the construct is reflected accurately though indicators with formative or reflective relationships and, as discussed in Section 5.4, all of the first order constructs in the path model are measured with reflective indicators – i.e. indicators that reflect the construct as opposed to form the construct.

5.3.3.4 Reflective measurement model evaluation

The measurement model for this analysis was built in sequence starting with the relationships between the seven constructs of an EMO and the five constructs identifying the adoption and use of digital marketing technology and their respective indicators.

Evaluation of the PLS-SEM path model is done by testing the reliability and validity of the indicators of each construct, the relationships between the items and the constructs and, interpretation of path coefficients (Sarstedt et al. 2009 Wiedmann et al. 2011). This is done using two distinct stages (Navarro et al. 2011). The first is the evaluation of the measurement model and the second is analysing the structural model. The sequence is important as it ensures that the proposed indicators that form the measurement scale for the second order constructs are valid and reliable before the hypotheses are tested (Navarro et al. 2011).

PLS-SEM has a number of ways to evaluate the reflective measurement model – convergent validity; internal consistency; and discriminant validity. The measurement items are analysed using composite reliability and discriminant validity. The convergent validity of each of the indicators, i.e. the understanding

associated with the question-statements by the respondent is as intended by the researcher (Kock and Lynn 2012), is analysed through loadings and cross loadings.

Convergent validity is defined as the degree to which a measurement item positively correlates with alternative measures of the same construct (Hair et al. 2019). Put another way, it is the understanding associated with the questions or statements by the respondent is as intended by the researcher (Kock and Lynn 2012). Convergent validity is evaluated through the outer loadings of the measurement items and the average variance explained (AVE). The outer loadings represent the absolute contribution of a measurement item to its assigned construct with values greater than 0.7 considered acceptable (Hair et al. 2019). The AVE is another measure of commonality of the measurement indicators where a value lower than 0.5 indicates that, on average, there is more variance in the error of the indicators than in the variance explained by the construct (Hair at al. 2017).

Internal consistency reliability was measured using a combination of composite reliability through the different outer loadings of the indicators and Cronbach's Alpha. The parameter for composite reliability is between 0.6 and 0.9 in PLS-SEM for exploratory research. Both Cronbach's Alpha and outer loading measures are used as they complement each other with composite reliability tending to overestimate the internal consistency and Cronbach's Alpha underestimating it.

Discriminant validity measures the extent to which the constructs in the measurement model are distinctive. Three measures were used for discriminant validity – cross loadings; the Fornell-Larcker criterion and the heterotrait-monotrait (HTMT) ratio. Ideally cross loading values for measurement items should be high (greater than 0.5) on the construct they are measuring and low (less than 0.5) on other constructs (Hair et al. 2014). The Fornell-Larcker method checks that a construct shares more variance with its measurement indicators than any of the other constructs. Smart PLS uses the HTMT ratio to counteract the criticisms that cross loadings and Fornell-Larcker do not accurately detect discriminant validity issues (Hair et al. 2019). As a ratio, it estimates the true correlation between constructs if they were perfectly reliable.

5.3.3.5 Structural model evaluation

The structural model is evaluated based on its ability to predict endogenous constructs starting with the significance and relevance of coefficients. Bootstrapping is required (see Section 5.3.3.6) to examine *p* values and, boot strapping confidence levels i.e. to test the path coefficient is significantly different to zero (Hair et al. 2017). Collinearity checks of the structural model are carried out through analysis of the Variance Inflation Factors (VIFs). Path coefficients are compared in addition to the total effects (f^2 and q^2) – allowing the identification of the key constructs within EMO that have the highest significance in explaining AUDT. The R^2 values, between 0 and 1, demonstrate the amount of explained variance in AUDT and can vary according to the research discipline but are generally considered as substantial with a value of 0.75, medium as 0.50 and 0.25 is weak (Henseler et al. 2009; Hair et al. 2011).

5.3.3.6 Bootstrapping

PLS-SEM is a regression-based analysis method however, it does not make assumptions about specific data distributions and derives a distribution of the data by using bootstrapping as the basis for significance testing (Hair et al. 2017). In SmartPLS, a subsample of the data is created, (5,000 cases is the recommendation by Henseler et al. 2009; Hair et al. 2017) by randomly drawing (with replacement) from the original data set to estimate the model. Replacement is explained by Hair et al. (2017, p.149) as: -

> *"… each time an observation is drawn at random from the sampling population, it is returned to the sample population before the next observation is drawn…Therefore, an observation for any bootstrap sample can be selected more than once or may not be selected at all for the sample."*

A bootstrap confidence interval is derived from the subsample by using the HTMT statistic to create standard errors for the estimated parameters of the mode and ultimately *p* values (with a value under 0.05) to represent significance.

5.4 Development of the analytical model

Quantitative research requires a structured design to result in objective, valid and reliable measurement of variables and relationships. In order to explore and analyse relationships between the essentially unobservable variables in this study – namely EMO, ADT and AUDT - the elements of these latent variables need to be identified and the relationships modelled between elements and their indicators.

In PLS-SEM, the first stage of exploring relationships between variables is done through the development of the path model. However, before the path model is created, there are a number of elements that must be considered and understood, as there are a number of pitfalls specifically relating to measurement that can undermine the research process. Firstly, the constructs or latent variables that are not directly measured must be clearly defined in order that they may be accurately measured. Secondly, the indicators that accurately form or reflect the construct in question should be carefully considered to ensure they are doing the job they are designed to do. Thirdly, incorrectly specifying the direction of the causal relationships between constructs and their indicators can provide spurious results. Finally, the under-utilisation of techniques that establish construct validity (MacKenzie et al. 2011) also impair the robustness of the research – this is dealt with in the analysis process in chapter 6.

This section begins with a reminder of the definitions for the constructs that will be analysed - EMO, ADT and AUDT. The first order constructs of these three latent variables are then explored and defined, having given rise to the questionnaire statements. The potential overlap of the seven characteristics with the EMO construct is explored for an accurate domain definition. The difference between the causal direction of the indicators is examined next through formative and reflective measurement and finally the path models for analysis are developed.

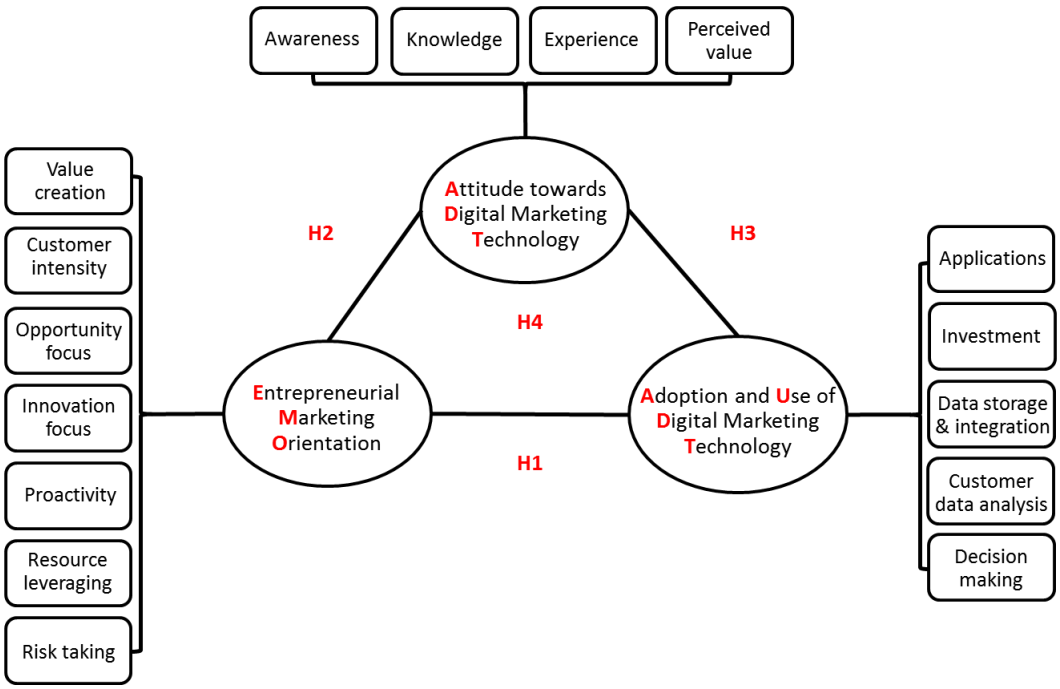
5.4.1 Defining the constructs for measurement and analysis

Following the literature review and development of the conceptual framework, a number of variables or constructs were identified to be measured and validated.

The term construct is used to describe variables that are abstract and latent as opposed to absolute and observable (Nunnally and Bernstein 1994; Mackenzie et al. 2011). As the latent variables are derived from a number of sub-dimensions (first order constructs), they may be defined as 'second order constructs' and it is these latent constructs that provide the basis for the sections of the questionnaire survey design in the conceptual framework (Figure 5.3): -

a. Entrepreneurial marketing orientation (EMO).
b. Attitude towards digital marketing technology (ADT).
c. Adoption and use of digital marketing technology (AUDT).

Figure 5.3: Conceptual framework with EMO, ADT and AUDT variables



A key part of the analysis model is the correct specification of the constructs and the indicators that conceptualise them as individual domains, as well as the causal direction of the relationships between the variables and the items that measure them. The scope of the conceptual domain of a construct emerges from definitions of what it represents and how it differs from other related constructs. Maintaining consistency with the literature, by using unambiguous terms and being clear and concise about the characteristics, leads to a rigorous conceptual definition and the formation of robust measures (Hoyle 1995).

Inadequate definitions of the constructs can lead to confusion about what the inherent elements of the construct are and what they are not. Overlapping definitions can occur with other extant constructs in the field of study and, finally, reaching conclusions about relationships that are invalid because the indicators or measures of the construct(s) are not capturing what they were supposed to (MacKenzie et al. 2011). The constructs for this study are laid out in Table 5.4.

Table 5.4: Second order constructs and related first order constructs

Second Order Construct	First Order Construct
EMO	• Customer intensity • Innovation focus • Opportunity focus • Proactiveness • Resource leveraging • Risk management • Value creation
Attitude towards digital marketing technology	• Awareness of digital marketing technology • Experience of digital marketing technology • Knowledge of digital marketing technology • Perceived value of digital marketing technology
Adoption and use of digital marketing technology	• Number of digital applications adopted and or used • Level of investment (time, money, resources) • Customer data storage and integration • Customer data analysis • Decision making

It is important to understand how distinctive each first order construct is from the other constructs that represent the latent variable. For example, if one first order construct is eliminated, would there be a significant change in the conceptual domain of the second order construct - this is construct dimensionality (MacKenzie et al. 2011). Defining the scope and dimensionality was done for both order levels of all three constructs (Appendix A). After the definitions and dimensionality of the first and second order constructs were complete, the measurement items were derived.

As a result of the lack of peer reviewed and published work using EMO measurement scales, an approach to measure and validate EMO as a conceptual domain was used that is recommended by MacKenzie et al. (2011). The purpose of construct validation is to specify the parameters of the measurement items related to the construct and to determine how the items tend to measure the same construct elements using empirical evidence and statistical analysis (Nunnally and Bernstein

1994). Following this procedure tested the adequacy of the construct measurement by minimising their deficiencies and contamination due to overlapping definitions. The MacKenzie et al. (2011) framework for developing robust construct measures assumes inadequate scale validation and, in this instance, the first two steps of their scale development procedure, namely conceptualisation and development of measures were followed for each of the seven characteristics of an EMO. Measurement items for ADT and AUDT have been adapted from published work and referenced accordingly.

5.4.2 Measuring the constructs at the first and second order level

Having decided on the conceptual definitions of the constructs being measured, the next stage in the research process was to identify the measurement items or indicators that would measure the latent variables. As previously mentioned, the latent variable is not directly observable, however its presence can be demonstrated by combining several measurement items to form a multi-item scale that indirectly measures it (Hair et al. 2017). The logic for this is that the more items that are used to measure the latent variable, the more accurate the measurement will be. As each item represents a statement or questions in a survey, that does however, need to be weighed up against the potential response rate according to the length of the questionnaire, drop outs and questionnaire fatigue, as well as ensuring the reliability and validity of the measurement items themselves.

As discussed earlier, the key to accurate measurement of the constructs is to minimise the overlap of the indicators and make them as distinct as possible. The approach taken for each construct is discussed in the following sections - the first order constructs are initially defined, with the key words that are highlighted due to their potential similarities. The definition and key words were considered when generating the indicators for the questionnaire statements and questions.

5.4.2.1 Entrepreneurial marketing orientation

Entrepreneurial Marketing (EM) has been a focus of marketing and business scholars since the 1980s and there are a number of definitions to date. The definitions outlined in chapter 3 (Morris et al. 2002; Hills et al. 2010; Hills and

Hultman 2011; Ioniţă 2011; Whalen 2015) demonstrate the variations of opinion on the definitions of EM. At the same time, these definitions illustrate the similarities e.g. proactivity; orientation (relating to spirit), passion, uncertain environments and growth that are used in the work by Morris et al. (2002).

Creativity is a key part of EM and is represented in the Morris et al. (2002) definition and its seven dimensions - proactivity; opportunity focus; customer intensity; innovation focus; attitude to risk; resource leveraging; and value creation. The Morris et al. (2002; 2003) definition has been used as the basis for the conceptualisation of the EMO construct at a first and second order level and as a basis of the measurement items for the online survey (Table 5.5).

Table 5.5: Definitions of the first order constructs of an EMO

First order construct	Definition Components
Customer intensity	An intense, dynamic knowledge of changing customer situations and requirements, resourcefulness, relating to customers on a more personal level.
Innovation focus	Ideas that translate into new marketing activity from internal and external sources.
Opportunity focus	Environmental scanning, creative pursuit of opportunity regardless of own, limited resources for a competitive advantage.
Proactivity	Continuous search for new ways to achieve a competitive advantage through incremental change - the extent to which actions are taken to influence and change any aspect of marketing practice to reduce uncertainty.
Resource leveraging	Doing more with less and utilising others' resources.
Risk management	Reduce environmental uncertainty, deft allocation or withdrawal of resources to increase flexibility, mitigating risk that is associated with innovation.
Value creation	Discovering new sources of value for customers, working out ways to add value, combining resources to create value (the reason customers engage with the business and what is different to competitors) as well as reduce uncertainty.

Morris et al. 2002; 2003

A clear conceptual definition is required for each first order construct (Mackenzie et al. 2011; Jarvis et al. 2003) in order to develop accurate measurement items. Conceptually, the seven dimensions of EM are defining characteristics and are not independent of each other, and do not need to be operating concurrently for an EMO to exist (Morris et al. 2003). Therefore, a change in only one of the seven dimensions could be associated with a change in EMO, thus the dimensions are considered formative indicators of EMO in terms of dimensionality.

In the next section, the seven characteristics of an EMO (Morris et al. 2002) are defined with key words that conceptualise them, the potential overlaps with other EM characteristics highlighted alongside the questionnaire survey statement.

5.4.2.1.1 Customer intensity

Customer intensity is demonstrated by an intense, dynamic knowledge of changing customer circumstances and requirements. Having customers as the focus of any business requires resourcefulness in order to relate to customers on a more personal level. Customer intensity is linked with value creation (Morris and Lewis 1995; Hills et al. 2010; Jones and Suoranta 2013) and opportunity focus through the data that customers provide (Whalen et al. 2015). Table 5.6 highlights the keywords associated with customer intensity, the potential overlaps with other EMO characteristics, and the questionnaire survey statements.

Table 5.6: Key words for customer intensity and overlap with other EM characteristics

Key Word	Overlap	Survey Statement
Communication	Opportunity focus - involving the customer at every stage is seen as essential as they will sustain the business and provide data for new opportunities and create a competitive advantage (Whalen et al. 2015)	Customers are communicated to throughout their experience with the business
CRM	Value creation - EM is an augmented process, where the entrepreneur and the customer are core actors, co-creating value within the marketing environment. Proactivity - closeness to the market possible by smaller size, sense of customer needs, wants and demands, no need for costly and time-consuming market research, an intuitive ability to anticipate changes in customer demands (Morrish 2011; Collinson and Shaw 2001)	Customer profiles have been created using digital customer data Relationships with customers are built through our marketing activities
Insight	Value creation and opportunity focus - customers are dynamic resources in the creation of value (Miles et al. 2011)	Business marketing activities reflect knowledge of what our customers want
Interaction	Opportunity focus – the EM approach is not necessarily logical and sequential but unconventional and organic due to living with customers' needs and preferences (Ioniţă 2012)	There are response time targets for customer enquiries

5.4.2.1.2 Innovation focus

An innovation focus can be expressed as creating ideas that translate into marketing activity from internal and external sources. Innovativeness,

experimentation, exploration and creative acts as reflected in, for example, new products or services, new process technologies, new methods of operation, and new business strategies (Covin and Wales 2011). An innovation focus is linked with opportunity focus (Renton et al. 2015), value creation (Hills et al. 2008; Miles et al. 2011; Morrish 2011), proactiveness (through learning Miles et al. 2011) and risk taking (Getz and Carlsen 2005). Table 5.7 highlights the keywords associated with Innovation Focus, the potential overlaps with other EMO characteristics, and the questionnaire survey statements.

Table 5.7: Key words for innovation focus and overlap with other EM characteristics

Key Word	Overlap	Survey Statement
Flexibility	Opportunity focus, resource leveraging, risk - Environmental turbulence leads to intensified pressure for innovation and entrepreneurship	I accept that failure can contribute to learning for the future
Exploitation	Proactivity and opportunity focus - innovation and opportunity exploitation logically fit with environmental scanning and market opportunity analysis (Morris and Lewis 1995).	I frequently try new ideas to differentiate what we offer
Creativity	Value creation and opportunity focus - Innovative marketing for SMEs is complementary to existing activities, builds on prior activities, is continuous, maybe marginal or incremental, can be reactive or market lead, or opportunistic and profit driven – within the characteristics and abilities of the SME (Gilmore 2011).	Digital technology has changed our marketing activities I am always looking at ways to improve the services we provide
Intuition	EM is characterised by an intuitive ability to anticipate changes in customer demands – the ability to collect market information on a regular, daily basis is imperative and an important competency for the EM manager (Collinson and Shaw 2001).	I believe that our marketing activities will change in the future
Leadership	Proactiveness - linked to knowledge transfer and absorption (i.e. learning process) - both critical to competitiveness (Shaw and Williams 2010).	

5.4.2.1.3 Opportunity focus

Opportunity focus is key for a competitive advantage and concerns environmental scanning, creative pursuit of opportunity regardless of limited resources. It is one of the four underlying dimensions of entrepreneurship - the others are innovativeness, risk-taking, and proactiveness (Morris et al. 2003). Opportunity focus is linked to proactivity (Jones and Suoranta 2013). Table 5.8 highlights the keywords associated with Opportunity Focus, the potential overlaps with other EMO characteristics, and the questionnaire survey statements.

Table 5.8: Key words for opportunity focus and overlap with other EM characteristics

Key Word	Overlap	Survey Statement
Judgement	Value creation and innovativeness - the responsibility for redefining the product and market context within which the firm operates (change), identifying novel sources of customer value (Davis et al. 1991).	I pursue opportunities regardless of money and resource constraints I react to changes in competitor marketing activity
Exploitation	Proactivity and innovativeness - venture idea identification, innovation and opportunity exploitation logically fit with environmental scanning and market opportunity analysis (Morris and Lewis 1995).	I use analytical applications to identify new marketing opportunities
Flexibility	Resource leveraging and Risk management - emphasises the need to lead customers and markets and to redefine critical aspects of the external operating environment (Hamel and Prahalad 1992).	I can respond quickly aiming to take advantage of unpredictable market events
Insight	Value creation and customer intensity - emphasising unproven wants, new market segments, new technologies, and continuous innovation in all areas of the marketing mix (Morris et al. 2003).	My market knowledge helps to create new opportunities

5.4.2.1.4 Proactivity

Proactivity is reflected by the continuous search for new ways to achieve a competitive advantage through incremental change. Proactivity is the extent to which actions influence and change marketing practice to reduce uncertainty. Table 5.9 highlights the keywords associated with Proactivity, potential overlaps with other EMO characteristics, and the questionnaire statements.

Table 5.9: Key words for proactivity and overlap with other EM characteristics

Key Word	Overlap	Survey Statement
Action	Opportunity focus - engaging in forward-looking actions targeted at the exploitation of opportunity in anticipation of future circumstances, as would be (Covin and Wales 2011)	I review and analyse competitors I keep up to date with tourism industry developments
Exploitation	Opportunity focus and innovativeness - linked to the recognition and exploitation of opportunities - it requires a hands-on management style (Jones and Suoranta 2013)	I look outside existing customers for new ideas
Initiative	Risk Management and usually implies tenacity, adaptability, and some responsibility for failure (Morris et al. 2003)	Reviewing digital marketing strategy is necessary to grow the business
Leadership / Influence	Innovativeness - enhancing the level of control over its destiny - typical of firms that lead and/or pre-empt the actions of others (e.g. market pioneers, early adopters of new technologies) (Morris et al. 2003; Covin and Wales 2011)	I actively seek to influence customer expectations

5.4.2.1.5 Resource leveraging

Resource leveraging is essentially doing more with less by maximising the use of resources, finding new ways of using resources and utilising others' resources – it can involve combining resources to create greater value and such skills as motivation when it comes to people as a resource. Table 5.10 highlights the keywords associated with Resource Leveraging, the potential overlaps with other EMO characteristics, and the questionnaire survey statements.

Table 5.10: Key words for resource leveraging and overlap with other EM characteristics

Key Word	Overlap	Survey Statement
Risk	Risk Management - use resources in non-traditional ways (Morris et al. 2002) - the individual is not constrained by the resources under their control and ambition always exceeds resources (Morris et al. 2002)	I always work within the limits of what is available to me.
Competences	Innovativeness - creative use of limited resources in the small firm, do more with less through insight, experience and skill, recognise how to optimise resources (Morris et al. 2002; Fillis and Wagner 2005)	I do not use all the customer data available to me for marketing decisions. The staff have digital skills that I am able to use when I need to.
Networks	Proactivity - successful exploitation of personal networks (Fillis and Wagner 2005)	I use my network to develop new ideas for customer marketing.
Partnerships	Proactivity - utilise the resources of others to accomplish their goals (Morris et al. 2002)	I am open to working with a wider network outside the industry.

5.4.2.1.6 Risk management

Risk management helps to reduce environmental uncertainty by allocating or withdrawing of resources to increase flexibility, mitigating the risk that is associated with business processes and innovation. The attitude towards risk by the owner-manager is also demonstrated by their willingness to commit resources to business projects, ideas or processes whose outcomes are uncertain and for which the cost of failure would be high (Covin and Wales 2011). Table 5.11 highlights the keywords associated with Risk Management, the potential overlaps with other EMO characteristics, and the questionnaire survey statements.

Table 5.11: Key words for risk management and overlap with other EM characteristics

Key Word	Overlap	Survey Statement
Agility	Innovativeness and Resource Leveraging - lack of predictable resource needs, increased resource specialisation (Morris and Lewis 1995; Morris et al. 2002; Getz and Carlsen 2005)	In uncertain times, I spend more on marketing. It is necessary to take risks to improve the service we offer. Customer data security is a risk from digital marketing technology.
Commitment	Proactivity and Opportunity Exploitation - varies according to the person taking the risk (Miles et al. 2011; Whalen et al. 2015)	Our marketing activities tend to be low risk. If I know what the benefits of new technology are, I will invest in it.
Flexibility	Opportunity Focus and resource leveraging - short decision windows, diminishing opportunity streams, changing decision contingencies, fragmented markets (Morris and Lewis 1995)	

5.4.2.1.7 Value creation

Value Creation is defined as discovering new sources of value for customers, working out ways to add value, combining resources to create value (the reason customers engage with the business and what is different to competitors) as well as reduce uncertainty (Morris et al. 2003). Value creation is linked to innovation (Hills et al. 2008, Hills et al. 2010, Morrish et al. 2010), customer intensity (Morris and Lewis 1995, Hills et al. 2010, Jones and Suoranta 2013) and leveraging network resources (Hills et al. 2010, Morrish et al. 2010). Table 5.12 highlights the keywords associated with Value Creation, the potential overlaps with other EMO characteristics, and the questionnaire survey statements.

Table 5.12: Key words for value creation and overlap with other EMO characteristics

Key Word	Overlap	Survey Statement
Creativity	Innovativeness and Opportunity Focus - value created through relationships, innovativeness, creativity, selling, market immersion, networking and flexibility (Hills et al. 2010)	I change external partners when necessary to create value for customers.
Customer insight	Customer intensity - delivering value comes from organisations driven by customer satisfaction, understanding how customers value products and services, two-way communication processes and market intelligence (Jones and Suaronta 2013)	Customer data from digital marketing improves the service the business offers.

Differentiation	Leveraging resources - superior value proposition created through differentiation, leveraging resources (networks), exploiting opportunities and focussing on the needs of customer (Morrish et al. 2010)	I can define the value that our customer receive that provides a competitive advantage.
Focus	Customer Intensity - value creation depends on customer feedback and ongoing assessment of needs. (Morris and Lewis 1995; Morrish 2011; Collinson and Shaw 2001)	Digital marketing activity is driven by my customers.
Market intelligence	Customers are dynamic resources in the creation of value (Miles et al. 2011)	I focus on turning customer information into insight for better customer experiences.

The survey instrument included two reflective statement of the construct EMO. Both statements were included for the final stages of the modelling process to compare their performance against formative measurement items (Table 5.13).

Table 5.13: EMO reflective statements

Reflective EMO Statements	REFDataInsightGrowth	I use customer data to gain insight to create customer value and opportunities for growth
	REFNewMktgLeader	Trying brand new marketing ideas before my competitors helps me to learn even if they do not work out

5.4.2.2 Attitude towards digital marketing technology

According to Rogers (2003), attitude is an abiding set of beliefs about matters that predispose actions and individual perceptions of the attributes are key. The attitude of owner-managers is one of the key determinants in digital marketing technology adoption (Simmons et al. 2008) - it is grounded in the perception of its benefits (Jones et al. 2014) and it is influenced by how they feel about change and innovation. It can manifest itself on a positive to negative disposition continuum.

As attitude is a key component in influencing the adoption and use of a variety of digital marketing technology (Edison Geissler 2003) it is important to understand what attitude actually represents. According to Eagly and Chaiken (1993) attitude is a psychological tendency that is manifested by evaluating a specific entity to decide if it is favourable or unfavourable. This is taken a step further by Ajzen and Fishbein (1980) by considering behaviour towards the entity – in other words the actual adoption and use of digital marketing technology.

Conceptually, attitude is a feeling within the STB owner-manager (attitude towards digital marketing technology, emotion) and a perception of it (perceived ease of use of digital marketing technology, perceived usefulness of digital marketing technology). Attitude is considered to be made up of awareness, knowledge, experience and perceived value and a change in any of these constructs is expected to produce a change in the concept of attitude, therefore, they are formative representations that are considered conceptually distinct.

5.4.2.2.1 Awareness of digital marketing technology

Rogers (1995, p.372) defined awareness of technology as the "user's knowledge about the capabilities of a technology, its features, potential use, and cost and benefits, i.e., it relates to awareness-knowledge". In this study, awareness acknowledges the existence of digital marketing technology but not necessarily the detail associated with its features and costs. Table 5.14 highlights the keywords associated with awareness of digital marketing technology (DT), the associated questionnaire survey statements and the reference the statement is based on.

Table 5.14: Key words associated with awareness of DT, references and statement

Key word(s)	Questionnaire Statement	Reference
Suitability, influence of others	I seek out new forms of digital marketing technology when I need to.	Moore and Benbasat 1991; Abrahão et al. 2016
Suitability	I am aware of the benefits of using digital applications for marketing communications.	Abrahão et al. 2016
Development, competitor influence	I am aware of the digital marketing applications available to me.	Wymer and Regan 2005
Development	I keep up with the developments of new digital marketing technology.	Srinivasan et al. 2002
Product Knowledge	I am aware of my customers preferred marketing communication channels.	Peltier et al. 2012

5.4.2.2.2 Knowledge of digital marketing technology

This aspect of attitude develops from awareness and in this study includes specific knowledge regarding features, costs, benefit and ease of use. Knowledge of what digital marketing technology can do for the business, understanding how tools and applications work and how they can be used. Table 5.15 highlights the keywords

associated with knowledge of digital marketing technology (DT), the associated questionnaire survey statement and the reference the statement is based on.

Table 5.15: Key words associated with knowledge of DT, references and statement

Key word(s)	Questionnaire Statement	Reference
Effort expectation, complexity	Learning about new digital marketing applications is easy for me.	Abrahão et al. 2016; Ramamurthy et al. 2008; Ritchie and Brindley 2005
Performance expectation	Digital marketing technology provides access to new customers.	Abrahão et al. 2016; Meriläinen 2017
Risk, effectiveness	I know how to measure the return on digital marketing technology investment.	Leeflang et al. 2014
Demonstrable trust	I know what contribution digital marketing technology makes to the bottom line.	Moore and Benbasat 1991
Risk, willingness to adopt technology	I am reluctant to use new technology until it has been proven.	Simmons et al. 2008; Wymer and Regan 2005

5.4.2.2.3 Experience of digital marketing technology

This aspect of attitude relates to cognition because of using digital marketing technology – what types of applications and tools have been used in the past, what has worked and what has not. Table 5.16 highlights the keywords associated with experience of digital marketing technology (DT), the associated questionnaire survey statement and the reference the statement is based on.

Table 5.16: Key words associated with experience of DT, references and statement

Key word(s)	Questionnaire Statement	Reference
Experience, skills, ability	I am experienced in using different digital marketing technology for communications.	Wymer and Regan 2005; Simmons et al. 2008; Ritchie and Brindley 2005; Wolcott et al. 2008
Ease of use	I have created opportunities using digital marketing technology.	Moore and Benbasat 1991
Prior experience	I draw upon personal experience for marketing communication decisions.	Spencer et al. 2012; Srinivasan et al. 2002
Attitude to change	I try out new digital marketing applications before I buy into them.	Peltier et al. 2012
Confidence	I am not confident using new digital marketing technology.	Wymer and Regan 2005

5.4.2.2.4 Perceived value of digital marketing technology

Perceived value reflects how digital marketing technology will add value to the business in terms of efficiency, reduced costs and customer experience. Table 5.17

highlights the keywords associated with the perceived value of digital marketing technology (DT), the associated questionnaire survey statement and the references the statement is based on.

Table 5.17: Key words associated with perceived value of DT, references and statement

Key word(s)	Questionnaire Statement	Reference
Usefulness	Digital customer data is easier to manage than other forms of data	Srinivasan et al. 2002
Benefits, competitive advantage	It is easy to build customer relationships using digital marketing technology	Simmons et al. 2008; Ramamurthy et al. 2008; Peltier et al. 2012
Priority	Digital marketing technology is growing in importance for this business	Wymer and Regan 2005
Effective communication customer experience	Digital marketing technology improves the quality of the marketing communication for the business	Srinivasan et al. 2002; Meriläinen 2017
Costs	There are additional business costs that come from digital marketing technology	Wymer and Regan 2005; Ritchie and Brindley 2005; Peltier et al. 2012

5.4.2.3 Adoption and Use of Digital Marketing Technology

According to Jones et al. (2014), owner-manager attitudes towards the adoption and use of digital marketing technology are grounded in the perceived benefits of the technology. The benefits are defined mainly as pragmatic solutions focusing on more immediate and attainable outcomes, such as sustainability and survival with limited consideration of longer-term goals.

Conceptually adoption and use are an action (behaviour, activity) by the business owner-manager and an outcome (degree of use). Little is known about the way small businesses adopt and utilise digital marketing technology (Peltier et al. 2012). How digital marketing technology is used can be considered in a number of ways - firstly, the applications the businesses are using, secondly their level of investment both in terms of time and money, and finally how they are using digital marketing technology to inform marketing strategy – expressed in customer data storage and integration, customer data analysis and decision making.

5.4.2.3.1 Digital marketing technology applications

The number of digital channels and analysis tools that the business has, has and uses, and does not have, represent the adoption and use of digital marketing technology applications (Table 5.18). The questionnaire statements were adapted from the references given. In addition, there was an opportunity for digital channels and tools that were not listed in the questionnaire to be added by the respondent.

Table 5.18: Questions relating to the use of digital marketing technology applications

Questionnaire Statement	**Reference**
Which digital channels does your business have and use, have and do not use and do not have for communication?	Chaffey and Patron 2012; Andal-Ancion et al. 2003
Which of the following PAID channels does your business use for advertising and marketing?	Chaffey and Patron 2012; Andal-Ancion et al. 2003
Which applications does your business have and use, have and do not use and do not have for customer data analysis?	Chaffey and Patron 2012; Andal-Ancion et al. 2003

5.4.2.3.2 Digital marketing technology investment

Both the amount of money invested in digital marketing technology and the number of hours per week spent using digital marketing technology by the owner-manager or employees, illustrated the level of investment by the STB (Table 5.19).

Table 5.19: Questions relating to digital marketing technology investment (time, money)

Questionnaire Statement	**Reference**
In the past 12 months, approximately how much was spent on digital and non-digital marketing by your business in the following areas • Digital marketing (e.g. email, social media, search marketing, digital advertising) • Other day-to-day digital running, staff, hosting or commission costs • Online customer behaviour and response analysis • One-off digital investment costs (e.g. website set up/development, online booking system, database set up, equipment)	Chaffey and Patron 2012; Harrigan et al. 2012; Thompson et al. 2013; Leeflang et al. 2014; Royle and Laing 2014
How many employees (excluding yourself) are involved in digital marketing?	Wymer and Regan 2005
In the last four weeks, approximately how many hours did you spend on digital marketing activities? (email campaigns, updating website, writing blog, social media posts, analysing customer responses, digital advertising campaigns etc.)	Wolcott et al. 2008

5.4.2.3.3 Customer data storage and integration

The storage and integration of customer data by the STB is a key part of the adoption and use of digital marketing technology. Customer data is generated through digital channels and tools and how it is stored affects how it may be used in addition to how it is integrated throughout the business, which affects the efficacy of its use (Table 5.20).

Table 5.20: Statements representing customer data storage and integration

Questionnaire Statement	Reference
Customer data from different marketing activities are stored in a digital database	Chaffey and Patron 2012
Customer data generated from different digital channels are integrated with other systems (e.g. email links to website, automated communication)	de Swaan Arons et al. 2014; Royle and Laing 2014; Harrigan et al. 2012
Digital marketing channels are linked to analysis tools to track online customer behaviour	Chaffey and Patron 2012; Martin and Matlay 2003
Our online booking system provides revenue data from different digital channels	Simmons et al. 2008; Ritchie and Brindley 2005
Customer data summaries are visualised for each of the digital marketing channels we use	de Swaan Arons et al. 2014

5.4.2.3.4 Customer data analysis

Large volumes of customer and market data are easily generated through digital channels and applications but if this data is not easily or regularly analysed by the STB, the potential benefit to the business is not realised. Digital marketing technology allows for communication campaigns to be easily tested and analysed to improve response rates and overall marketing communication for the business (Table 5.21).

Table 5.21: Statements representing customer and market data analysis

Questionnaire Statement	Reference
Market information (e.g. prices, competitors, industry) is accessed using the internet	Chaffey and Patron 2012
Customer data from digital marketing channels is analysed	de Swaan Arons et al. 2014
Digital marketing channel data are analysed for the latest customer information	de Swaan Arons et al. 2014
Digital marketing campaigns are tested to maximise customer response	Alford and Page 2015
Customer data analysis is used to inform customer targeting	de Swaan Arons et al. 2014

5.4.2.3.5 Marketing communication decision making

The marketing communication decision making statements in the questionnaire illustrate how customer data influences the marketing communication choices by the STB (Table 5.22).

Table 5.22: Statements representing marketing communication decision making

Questionnaire Statement	Reference
Digital customer data guides day-to-day marketing communication activities	Simmons et al. 2008
Digital customer data is used for marketing communication planning	Leeflang at al. 2014
New or updated content on digital channels is informed by customer data	de Swaan Arons et al. 2014
Our marketing communication is responsive to online customer behaviour	de Swaan Arons et al. 2014
Customer feedback from digital channels is used to improve our service	de Swaan Arons et al. 2014; Leeflang at al. 2014

5.4.3 Formative or reflective measures of constructs

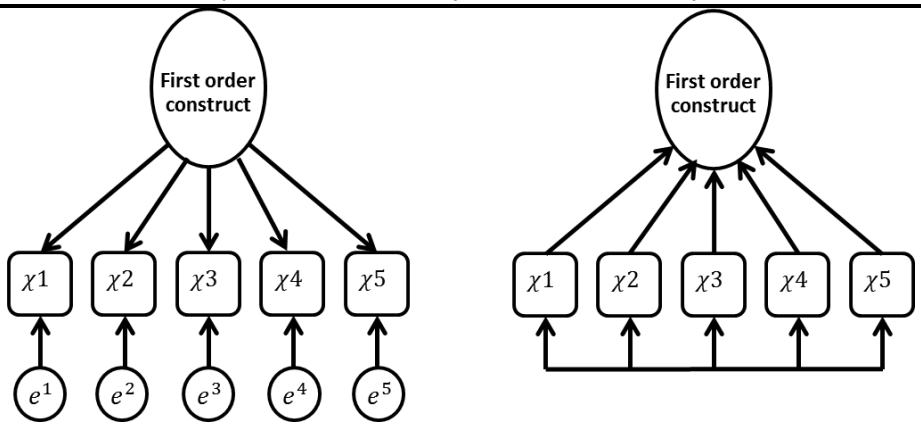
The path model in PLS-SEM is made up of the measurement model (also known as the outer model) and the structural (inner) model. The measurement model illustrates the relationships between the latent variables or constructs and their indicators (also known as measurement items) and the structural model defines the relationships between the latent variables themselves. The measurement items of the first order constructs are described as indicators – as they measure an attribute and responses to it (Mackenzie et al. 2011) and are the detail required for the measurement model.

All relationships in the PLS-SEM path model are identified using directional arrows – connecting indicators and constructs, and between the constructs themselves. This gives rise to the requirement to determine which direction the arrows take by identifying either a causal or effect relationship. Causal relationships are measured with formative indicators (or measures) and effect relationships with reflective indicators.

A potential measurement pitfall is incorrectly specifying relationships within the model and the direction of causality between constructs and their indicators, as

inaccurate conclusions can be drawn about the structural relationships between constructs (Jarvis et al. 2003). An example of this is dropping low value correlations to enhance internal consistency reliability – if this happens with formative indicators there are consequences where the empirical and conceptual meaning of the construct maybe changed (MacKenzie et al. 2011). Measurement models differ according to the presumed direction of causality between the latent construct and its measures. An arrow either pointing towards or away from the variable indicates the direction of the relationship and may be measured in either an effect (reflective) or causal (formative) model (Figure 5.4), where $\chi 1$ to $\chi 5$ represents the individual measurement items or indicators and e^1 to e^5 the error terms.

Figure 5.4: Effect model (reflective indicators) and causal model (formative indicators)

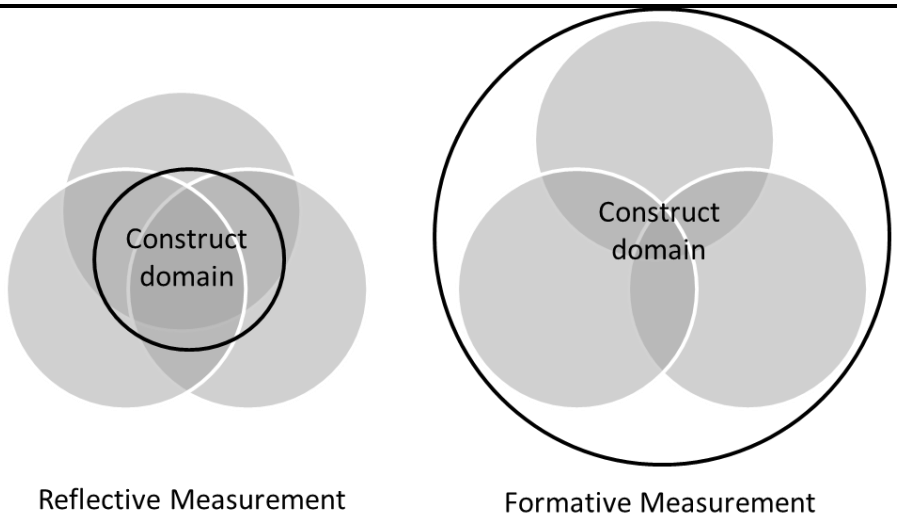


Source: Coltman et al. 2008

As shown on the left in Figure 5.4, with a reflective measurement model, the direction of causality is from the construct to the indicators. If there is a change in the construct, it leads to a simultaneous change in all items in the measurement model. The key is that the causal flow goes from the latent variable to the indicators i.e. the indicators reflect the latent variable, and so the observed indicator variables can be described as reflective. Because each indicator variable reflects the underlying latent variable, it is expected that the indicators will be at least moderately correlated with each other (Hair et al. 2018). The validity of the construct remains unchanged when an indicator is removed, as the essence of a unidimensional construct should be adequately represented in the remaining indicators (Jarvis et al. 2003).

In formative measurement models, the arrows point from the indicators to the construct – formative indicators represent the independent sources of the construct's content, but they are not necessarily correlated (Hair et al. 2017). The hypothesis is that any change in the measures cause a change in the underlying construct as the model assumes that all the measures will have an impact on (or cause) a single construct (Jarvis et al. 2003). This type of latent variable is a formative construct or composite latent variable (Hair et al. 2018). The measurement items form an index where each one helps predict the positioning on the scale, consequently the dimensions are diverse, meaning the correlations will be low. Considering the nature of the relationship between the indicators and the latent construct must inform the item scale development and evaluation, and a key part of this is formative or reflective measurement (Figure 5.5, Hair et al. 2017).

Figure 5.5: Reflective and formative variable measurement



Hair et al. 2017

Collinearity amongst formative indicators, that is a high correlation, presents problems as the weightings that link the indicators to the construct may become unstable and non-significant (Hair et al. 2017). An example of incorrectly specifying relationships occurs when formative indicators are evaluated without error terms when using reliability analysis. If this analysis is based on formatively measured indicator correlations (internal consistency), this error could result in removing important indicators and therefore, reduce the content validity of the set of construct indicators (Hair et al. 2017). In other words, dropping low value

correlations to enhance internal consistency reliability with formative indicators has consequences as the empirical and conceptual meaning of the construct maybe changed (MacKenzie et al. 2011).

The black circle in Figure 5.5 represents the construct that is being measured by the items that are represented by the grey circles. Reflective measurement maximises the overlap or correlation between interchangeable items, while formative measurement requires indicators that are different, but which may or may not be completely distinct or independent of each other.

Constructs are neither inherently formative nor reflective – the definition within the measurement model comes from construct conceptualisation and the objectives of the study. The aim of this study is to understand the different characteristics of an EMO that influence the adoption and use of digital marketing technology. A formative measurement model should identify those distinct drivers of adoption and use, along with more nuanced recommendations (Hair et al. 2017) as the analysis progresses.

The drivers can be identified by analysing the path model at the second order level through the creation of composite latent variables but this requires the first order constructs to be analysed in the first instance via the measurement and structural model within the PLS-SEM path model.

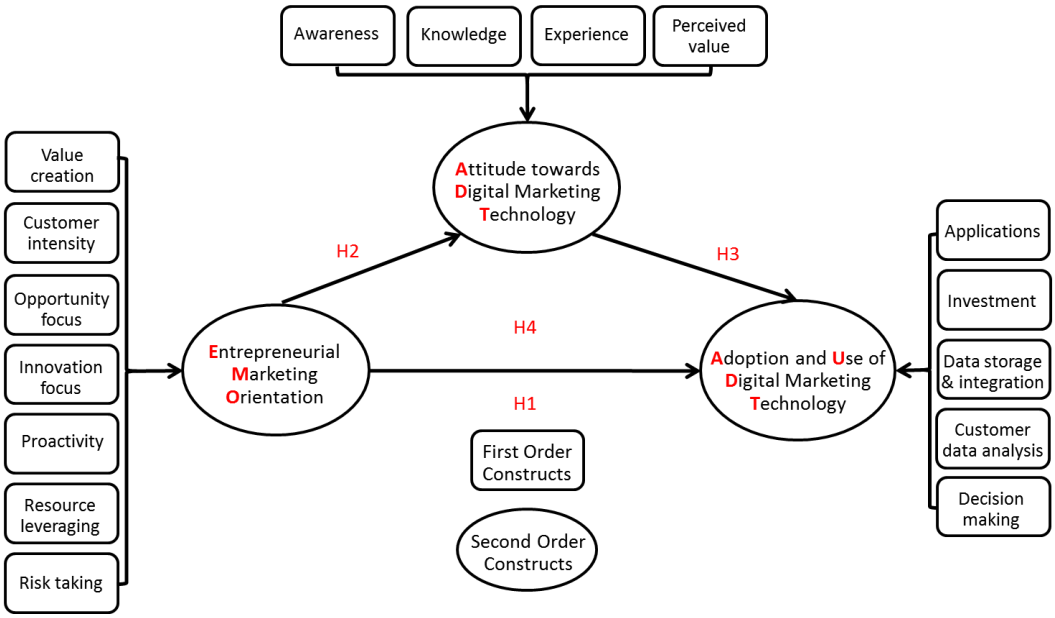
5.4.4 Path model development

The purpose of the path model is to demonstrate the relationships between latent, unobserved constructs and the dependent construct based on theory and accumulated knowledge. The conceptual framework (Figure 4.2, p.93) is now represented as a conceptual illustration of the path model with arrows indicating the causal directions of the relationships between the latent variables of interest, ultimately being estimated in this research (Figure 5.6).

This conceptual path model also illustrates the first order constructs that form the second order constructs of EMO, ADT and AUDT. The first order constructs are

parsimoniously grouped together with an arrow pointing towards the second order construct, indicating that they are formatively measured.

Figure 5.6: Conceptual model demonstrating construct relationships and hypotheses

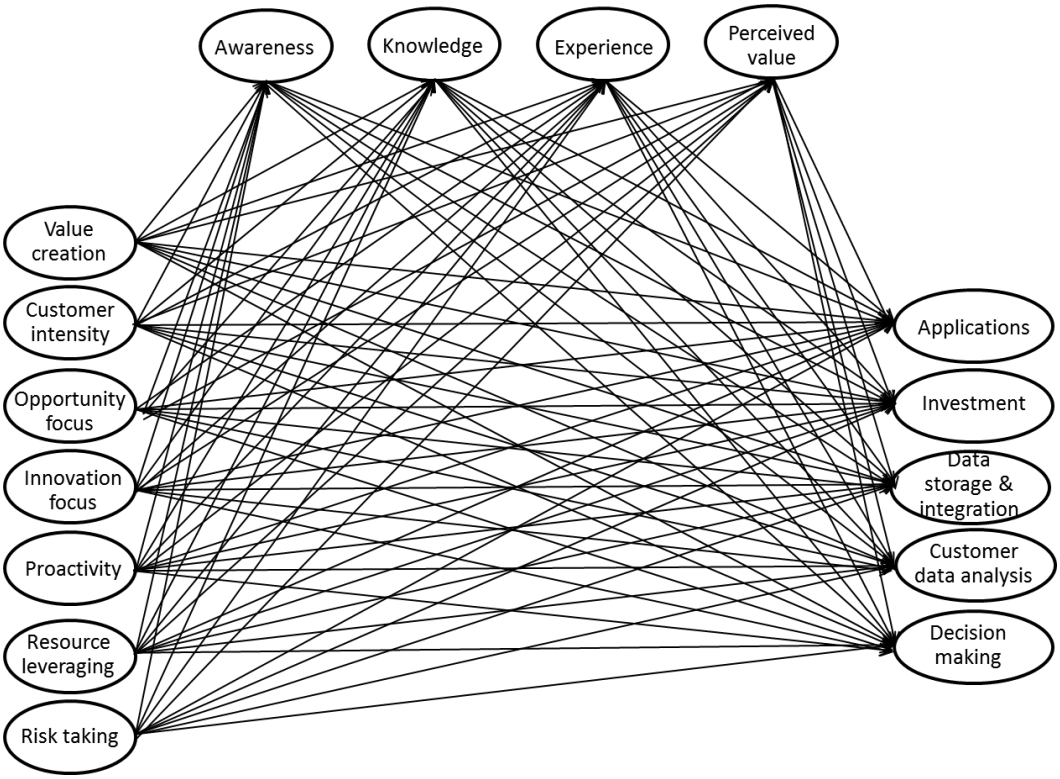


The PLS-SEM analysis model may be represented as a first order construct path model or a second order construct path model. Both the first order and second order constructs shown in Figure 5.6 are composite variables that constitute the multivariate analysis for this study, but they have to be analysed in the following sequence: -

1. Direct relationships between the first order constructs of EMO and AUDT (Model 1).
2. Indirect relationships between the first order constructs of EMO and AUDT mediated by the ADT first order constructs (Model 2).
3. Indirect relationships between the EMO and AUDT second order constructs mediated by ADT (Model 3).

In order to estimate the relationships between EMO, ADT and AUDT as latent variables, their composite indicators first need to be analysed and evaluated. The first order path model is complex, as each of first order constructs become the latent variables so there are 83 possible direct relationships to estimate (Figure 5.7).

Figure 5.7: First order construct path model excluding outer model indicators

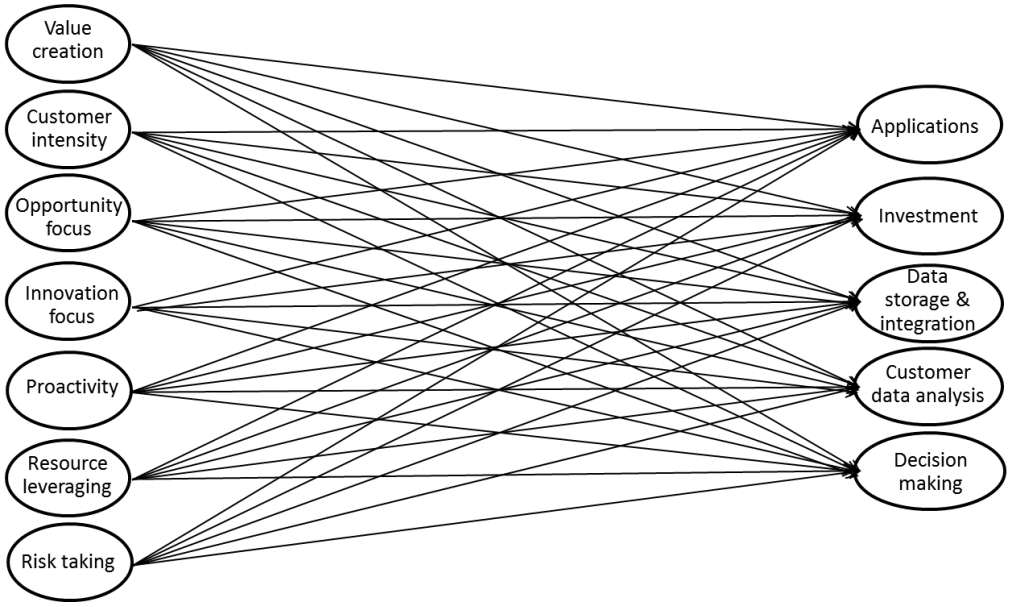


Each latent variable in the first order path model has between two and five indicators that are not shown in Figure 5.7. The indicators of these first order constructs are represented by the questions or statements contained within the questionnaire survey.

The complexity of this conceptual model is simplified by starting the analysis with the direct relationships of the first order constructs of EMO and AUDT that are analysed to determine the validity and reliability of all 12 constructs, the significance of any relationships between each of them and the effect size. Once again, the indicators are not shown in the conceptual path model in Figure 5.8.

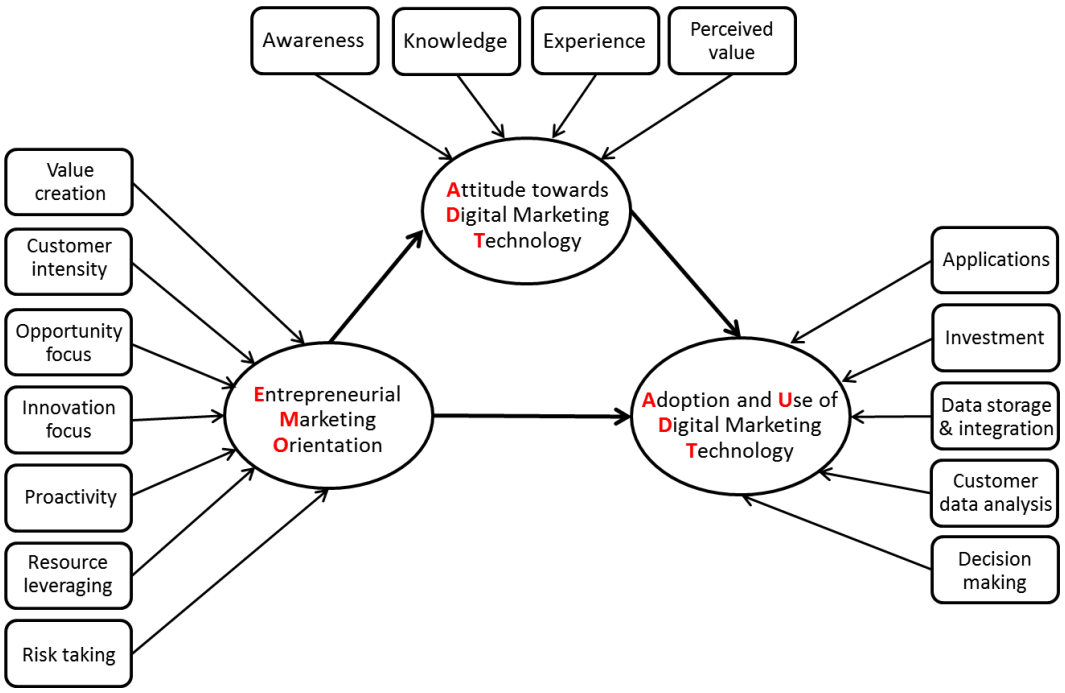
Once construct validity and reliability is established between the EMO and AUDT first order constructs, the mediating effect of the ADT first order constructs can be evaluated. Again, the analysis validates the first order constructs of ADT and checks for validity before the significance and the effect of the relationships are measured. Finally, the mediating effect can then be analysed.

Figure 5.8: Conceptual path model between EMO and AUDT first order constructs



The path model may then be conceptualised at the second order level by calculating the scores for the first order constructs and transforming them into indicators of EMO, ADT and AUDT (Figure 5.9).

Figure 5.9: Second order path model with first order constructs as indicators



The measurement of composite variables takes place through the assignment of numbers to a variable based on certain rules (Hair et al. 2017). Several variables are used to indirectly measure a construct on the premise that measurement accuracy will improve. The more indicators that are used, the more likely all the different aspects of the construct will be represented.

Statistically relating the covariance between the independent and dependent constructs via a structural model occurs in the final stage of the research. Covariance is the statistical analysis tool that is used to determine the relationship between the movement of two constructs. If the greater values of one variable mainly correspond with the greater values of the other variable, and the same holds for the lesser values, the covariance is positive. For the purpose of this research, statistical covariation enables the argument that a variation in the second order construct of EMO is positively associated with attitude towards digital marketing technology and a positive change in adoption and use of technology (Coltman et al. 2008). The variance can be described as follows: -

- an EMO is positively associated with the AUDT
- a variation in an EMO or some aspect of EMO will positively influence ADT
- a change in ADT will affect the AUDT

The independent constructs of EMO and ADT are hypothesised as positively influencing the levels of digital marketing technology adoption and use, the dependent construct.

5.5 Data collection

As described earlier, the statements that represent the indicators for the questionnaire survey have been generated with a number of considerations in mind. The first consideration is to accurately define the construct being measured and secondly to ensure that the wording of each statement is understandable to the target population (Hinkin et al. 1997). Finally, restricting the overall length of the survey is important to minimise the dropout rate and incomplete surveys due to

questionnaire fatigue. The study employed convenience sampling in order to distribute the survey and collect data for analysis.

5.5.1 Data collection process

There are clear distinctions between quantitative and qualitative data that are useful to consider when understanding the quantitative data collection process (Saunders et al. 2009), and these are outlined in Table 5.23.

Table 5.23: The Differences between quantitative and qualitative data

Quantitative data	Qualitative data
Based on meanings derived from numbers	Based on meanings expressed in words
Numerical and standardised data	Non-standardised, categorised data
Analysis through diagrams and statistics	Analysis through conceptualisation

Saunders et al. 2009

Quantitative data used for business research may be generated using three processes – structured observation, interviewer completed methods and self-completion questionnaires (Hair et al. 2011). Firstly, quantitative structured observation is a way of systematically recording the behaviour of individuals according to rules that are set in place in advance of the collection. An example of structured observation is time and motion study of factory workers (Saunders et al. 2009) - actions, behaviour or events are counted without the narrative that is recorded in qualitative observation (Hair et al. 2011). This form of research is not without criticism, mainly with the issue of generalisation, it rarely discovers intention, it can be fragmented and often neglects context (Bryman and Bell 2015).

The second form is structured interviewing where there is direct contact between the interviewer and the participant - either face to face, over the telephone or via the web. That can cause issues due to the effects of the characteristics of the interviewer on the respondent including race, gender and socio-economic status (Bryman and Bell 2015).

Self-completion questionnaires can be administered via post, online and drop and collect. The advantages and disadvantages of the self-completion questionnaire method are shown in Table 5.24 (Bryman and Bell 2015).

Table 5.24: Advantages and disadvantages of the self-completion questionnaire

Advantages	Disadvantages
Cheaper to administer	Cannot prompt or probe
Quicker to administer	Cannot know responders' salient questions
Absence of interviewer effects	Questionnaire can be read as a whole
No interviewer variability	Respondents are unknown
Convenience for respondents	Greater risk of missing data
	Lower response rate

Bryman and Bell 2015

Given these advantages, a self-completion questionnaire was chosen for the study and was distributed online, as online functionality also addresses the disadvantages of the questionnaire being read as a whole and flexibility with question functionality. The self-completion questionnaire survey was distributed online via Jisc Online Surveys (formerly BOS Bristol Online Surveys) as it is licenced to Bournemouth University.

The advantages and disadvantages of this project's online surveys are manifest in its appearance, functionality and immediacy. Colours, layout and variety in the form of closed questions can be easily changed, however, once the online survey was launched for this study the appearance was not changed. The rationale for this choice concerned maximising the impact of the survey, improve response rates and ensure that questions were answered due to the functionality that online surveys provide. The online questionnaire used individual URLs (uniform or universal resource locators) in order to identify the distributer of the survey link to provide responses when the data was collected, analysed and published. Due to the range of devices now available to access online material, websites require responsive functionality survey sites that are rendered appropriately according to the device that accesses them. In this instance, the functionality was such that it was recommended to complete whilst using a personal computer or laptop. The responsiveness of the site was something that could not be changed and as the STBs were contacted through their destination management organisation (DMO) via a working association, this was considered acceptable (see Section 5.5.5 and 5.5.7).

Respondents may be led through the survey process through the use of a progress bar and the amount of questions or pages do not impact on cost and can be

designed according to the needs of the sections so they do not appear to be cramped. At the beginning of the survey on the welcome page, participants were advised an average completion time and shown a progress bar to see how far they had progressed to completion.

Questions may be mandatory or optional and navigation can be automatically programmed according to the respondents' answer. Mandatory question functionality prevents respondents from progressing through the survey until all questions have been answered, ensuring that completed responses have answered all the questions. All the questions in this study were mandatory and had to be answered before progress could be made. An alert identified any incomplete questions before forward navigation was enabled.

Jisc Online Surveys allow researchers to see how many times the survey was accessed with some functionality showing where respondents have left the survey and there was no follow up functionality for dropouts other than the programme allowed dropouts to return to the page they dropped out on by clicking on the original survey link they used to access it.

Coding questions may be done in advance, according to the programme being used and respondent's answers automatically stored into databases formatted for analysis programmes. The Jisc programme provided a choice of data output and comma separated value files were used as it is a common type of file for importing into analysis programmes.

5.5.2 Questionnaire development

The questionnaire comprised 4 main sections – owner/manager and business characteristics (excluding identifiable data); ADT statements; EMO statements; and AUDT questions and statements (Appendix B). The composition of the dependent variable adoption and use of technology statements and questions evolved into scalable measures using financial data, number of hours spent using digital marketing technology and the specific, named number of applications used. Binary Yes/No questions were used to measure the digital marketing technology

applications that the business uses with frequency of use measures. The rationale was to determine actual behaviour as opposed to attitudes towards usage.

In the survey instrument, each indicator variable takes the form of a statement: the item statements are generated according to the advice of Hinkin (1998, pp.107-108) to (a) keep statements as short as possible and (b) to ensure that the statement wordings are understandable to the target population. A further consideration was not to include more than one item to be measured per statement.

5.5.3 Population sampling

The concept of population is key within research strategy as it provides the base from which the research sample is to be drawn and helps to define the boundaries for generalisation (Eisenhardt 1989). There are issues surrounding the selection of elements, entities or individuals for survey research, the reason being, in most cases, it is impossible to include the entire population due to timing, finance and resource constraints. However, a sample should represent the population and it is generated through two broad techniques either probability or non-probability procedures (Saunders et al. 2009; Hair et al. 2011; Bryman and Bell 2015).

Essentially probability sampling techniques reflect a known, but not necessarily equal, chance of selection into the sample. Sampling elements are randomly selected, and probability of inclusion are determined in advance by the researcher. The main probability sampling techniques are simple random, judgement, stratified, cluster and multistage methods. In non-probability sampling, the researcher uses judgement to determine the elements to be included or excluded and as a result, not every element of the target population has a chance of being included (Hair et al. 2011). The most common non-probability sampling techniques are convenience, judgement, snowball or referral and quota methods.

There are two considerations for selecting the research sample – first, which businesses should be included and second, how many should be in the sample. In this study, a convenience sampling procedure was employed for accessibility and from a requirement to provide responses. The use of convenience sampling has

implications for generalising the results as those included cannot be guaranteed as representative of the population (Hair et al. 2011; Bryman and Bell 2015), that said, it is widely used in business and consumer behaviour research (Saunders et al. 2009). A further context for legitimising convenience sampling is gathering data that represents too good an opportunity to miss (Bryman and Bell 2015). Definitive findings may not be generated, but they could provide a basis for further research, and considered exploratory in the context of the sample.

5.5.4 Testing the questionnaire

To validate the questionnaire in terms of clarity and brevity, a draft was circulated to internal experts (Hardesty and Bearden 2004; Hair et al. 2006) within Bournemouth University. A second test of the survey design involved small tourism businesses who were known to Bournemouth University through the Digital Transformation study that took place in 2014. They were small business owners who were engaged with digital marketing technology and demonstrated a capacity to want to know more (Alford and Page 2015) in a qualitative study assessing digital marketing practice in 24 STBs. The pre-test was to establish that the questionnaire used terminology that was relevant in terms of digital marketing applications and tools and to see if any obvious items had been missed. Participants were observed when they completed the survey, the length of time taken to complete the survey was recorded and questions were discussed once the business owner had completed it. Some item statement wordings were adjusted based on the feedback received and an alteration made to identify whether technology applications were used or just dormant (see Appendix B).

5.5.5 Pilot study

The objectives of the pilot study were: -

- to test the delivery mechanism via the DMO to business owners through direct email, inclusion in regular newsletter and through links on social media
- to identify the number of follow up messages required
- to test the analysis model using limited but real data

The pilot phase of the study involved working with four DMOs. These were selected on their geographical location within England representing the North, East Midlands and the South - Visit Blackpool; Love Lincolnshire; Visit Shakespeare's England; and Visit Isle of Wight. With the pilot areas were two coastal locations and two inland locations. The DMOs were each sent a unique link that was distributed to their members either through direct email, emailed newsletters, social media or the link was featured on the DMO website – the choice was made by the DMO. Visit Shakespeare's England were unable to participate in the pilot due to internal changes but were able to participate in the main data collection.

As a result of the pilot test, it was discovered that the survey link did not work if the DMO used external services (e.g. Google Analytics™) to track responses and clicks on the link. The survey link will not work if any information is appended to the end of an online surveys survey link by an external service as it is considered as an attempt to insert unauthorised information into the survey response data, or an attempt to access a survey without the correct credentials.

The pilot survey included a number of 'other' options to encourage participating businesses to identify items e.g. names of applications that were not included in the original questionnaire. This was done to ensure that a full list would be available for the main data collection. A further amendment was to increase the number of business classifications in order to capture the categories that the businesses use to describe themselves. The text on the opening page of the survey website was adjusted and copy for a number of reminder communication was drafted for DMOs to use when encouraging completion by their members (Appendix C).

A total of 11 survey responses were completed over a 6-week period. The pilot response data was used to test that the measurement model worked. In order to test the model with more data, the results were triplicated to ensure that the model was specified correctly despite the spurious results. The total responses received in the pilot indicated that the administration of the main survey would take longer to achieve the target sample of 150 responses.

5.5.6 Administration of the main survey

The main survey was administered in the same way as the pilot study with a systematic approach to the initial contact, follow up email and maintaining contact to provide results and details of completed surveys.
It should be noted that Jisc Online Surveys record number of page visits by an IP address and not visitors, in other words a person may visit the first page a number of times, either on the same device or multiple devices and each time the system would record a single page visit. Once the survey had begun, the number of dropouts and completions were only recorded once.

5.5.7 Questionnaire distribution

A convenience sample for this study began with obtaining the details of the Destination Management Organisation (DMO) or Tourism Organisation (TO) from the Visit Britain website. Visit Britain is the overarching representative organisation of tourism in the UK and provided the information for the selection procedure by region. In total, Visit Britain offered the contact details of 134 DMOs or TOs in 8 regions. The secondary information was not consistent for each organisation and in some instances, the contact telephone number or website link were incorrect, so all information was verified by visiting the DMO websites and any without websites were not contacted.

Each DMO website was explored in turn for contact details and names of Marketing Executives who were subsequently contacted by telephone to establish their interest in participation. Those who expressed an interest were then invited to participate by agreeing to distribute the online survey link to their members. This approach provided accessibility to the tourism businesses with the benefit of the DMO's endorsement to encourage responses.

The strategy for maximising the impact and value of the survey was to include the Destination Management Organisations (DMO) as a conduit for distributing the survey link to their members. This involved recruiting DMOs to participate in the research (via telephone) with the offer of providing them with their unique survey results and the opportunity to compare and benchmark the responses from their

members. DMOs were invited to promote the survey link in newsletters, by direct mail, social media and with a link on their website. Whilst the element of control for distributing the link was removed from the research process, this was weighed against the impact of the DMO endorsement to their members. The research study was not concerned with measuring the communication method that produced the highest response rate although this became clear through dialogue with the DMOs.

5.5.8 Sample data description

In total, 54 Destination Management Organisations (DMOs) or tourism organisations (TOs) were contacted and invited to participate in the research. Organisations in Scotland and Wales were invited to take part but they declined, 34 agreed to participate in England. The geographical location of the participating DMOs and TOs that took part in the study were as follows - 12 from the North East, 8 from the South and South West, 5 were from the North West and 9 were from the Midlands. A summary of the DMO and TO participation in the survey is given in Table 5.25.

Table 5.25: English DMOs and TOs - summary of participation

Action	Total
Contacted by telephone and invited to participate in the study	54
Agreed to participate	34
Distributed survey link to questionnaire to members	30
Generated visits to the questionnaire website and survey pages	30
Generated completed responses	25

Of the organisations that participated, 30 distributed the link to the online questionnaire to the businesses that they worked and, in total, 25 organisations generated completed surveys. The majority (18) of DMOs and TOs generated between 1 and 5 complete responses, three generated between 6 and 10 complete responses, one generated 18 complete responses, two generated 19 complete responses, and one generated 25 complete responses. Four DMOs distributed the link but did not generate any complete responses. A further four DMOs did not distribute the link, despite agreeing to participate, as there were no survey completions and no page visits.

The landing pages of the personalised surveys were visited 1,399 times - this page provided information about the survey. The survey questions began on page 2 and finished on page 11. There were a further 365 visits to subsequent survey pages between page 2 and page 10, where responders dropped out of the survey. In total 157 responders completed the survey through to page 11. This represents a completion rate of 43% of those who started the survey on page 2 and continued to page 10. The completion rate for the pilot survey was 58%.

It is not known how many communication messages were issued by the DMO or TO as they managed the communication process to their member businesses, so a percentage response rate from the communication containing the survey links cannot be provided. However, during the data collection period, regular weekly communication with the DMOs and TOs gave some informal insights as a result of the questionnaire survey website and page visits being monitored daily. Some DMOs, Destination Bristol for example, mainly distributed the survey link in social media messages, which generated high site traffic but resulted in high dropout rates from the landing page and page 2. DMOs that sent the survey link via dedicated emails about the survey generated the most completed responses (for example, Visit Shakespeare's England and Forest of Dean and Wye Valley Tourism Association). A breakdown of the characteristics of the businesses that generated responses are given in Table 5.26.

Table 5.26: Participating tourism business characteristics

Variable	n	Percent
Business Type		
Hotel, Bed and Breakfast or Guest House	38	24.2
Self-Catering Accommodation	33	21.0
Campsite, Caravan or Holiday Park	10	6.4
Recreation or Leisure Attraction i.e. zoo, park	33	21.0
Cultural Attraction i.e. museum	18	11.5
Restaurant, Café, Tea Room, Pub, Inn or Bar	6	3.8
Tour Operator	6	3.8
Other – Seasonal Retail, Tourist Information etc.	13	8.3
Months Open Per Year		
1 - 10 – seasonal	9	5.7
11 - 12 – all year	148	94.3
Accommodation Businesses – No. of Bedrooms		
1-20	63	84.0
>20	12	16.0

Almost all the businesses operated all year round (94%) and over half of the completed responses came from tourism accommodation businesses (51.6%). Of those accommodation businesses, the majority may be classed as small with less than 20 rooms (Visit Scotland 2009). Table 5.27 and Table 5.28 show the data sample differences between micro and small businesses.

Table 5.27: Firm size by turnover and number of full-time employees

	Turnover	%	Full Time Employees	%
Micro Businesses (<€2m, 0-9)	142	90.4	132	84.1
Small Business (<€10m, 10-49)	15	9.6	25	15.9

Table 5.28: Part-time and seasonal employees by participating businesses

	Part Time Employees	%	Seasonal Employees	%
Micro Businesses (0-9)	135	86.6	140	89.2
Small Business (10-49)	21	13.4	17	10.8

When categorising the businesses by turnover, 90% of the businesses are micro businesses and when using numbers of part time and seasonal employees, micro businesses still make up the large majority of the sample. The demographic profile of the owner-managers in the data sample are given in Table 5.29.

Table 5.29: Demographic profile of the sample respondents

Variable	n	Percent
Age		
<24	5	3.2
25-34	8	5.1
35-44	26	16.6
45-54	37	23.6
55-64	59	37.6
>65	22	14.0
Business Experience		
<10	78	49.7
11-20	39	24.8
21-30	23	14.6
31-40	15	9.6
>40	2	1.3
Educational Qualification		
No educational qualifications	6	3.8
O'Level / GCSE / equivalent	15	9.6
A'Level / GCSE / equivalent	11	7.0
Higher National Certificate / Diploma	35	22.3
Undergraduate University Degree (BA, BSc)	58	36.9
Postgraduate University Degree (Masters, PhD)	32	20.4

From an age perspective of the owner-manager, almost 75% of the sample are over 45 years old. When asked about the amount of years that the respondent has owned or managed their current or other businesses, half of the sample declared they had less than 10 years' experience and over 39% had between 11 and 30 years experience. Almost 80% had some form of higher-level education qualification which is significantly greater than findings by Blackburn et al. (2013) using data from 2002 and may well reflect the age of the sample and the pursuit of higher education in the past two decades.

5.5.9 Assessment of the data sample

There are a number of recommendations regarding minimum sample sizes for analysing data using structural equation modelling (SEM), some examples are: -

- Loehlin (1992) recommends at least 100 cases, preferably 200
- Hoyle (1995) recommends a sample size of at least 100 to 200
- Kline (2005) considers less than 100 responses untenable unless the model is very simple
- Schumacker and Lomax (2004) found that sample sizes of fewer than 100 or 150 subjects was below the minimum
- Hair et al. (2014) indicate minimum sample sizes for maximum likelihood estimation are 100 to 150, 200 provide sound estimates and where factor loadings are between 0.67 to 0.74, sizes of around 200 are acceptable

Some authors estimate sample size relative to the number of observed variables (or constructs) and include the following: -

- Kline (2005) suggests a minimum of 10 cases per observed variable – in this study that would represent 160 cases
- Stevens (2002) recommend at least 15 cases per observed variable – 240 for this study
- Garson (2014) propose a sample of a minimum of 50 more than 8 times the number of observed variables in the model (i.e. 178)

The measurement model for this study contains 16 observed first order constructs and using the above guidelines with over 150 cases, the sample size meets the

recommended limits (Loehlin 1992; Hoyle 1995; Schumacher and Lomax 2004; Kline 2005; Hair et al. 2014) and is close to the number of cases per observed variables (Kline 2005).

5.6 Data processing

5.6.1 Exporting response data

Data was output from Online Surveys for each DMO in the 'analyse' tab using the 'export response data' option by selecting each DMO survey to export in turn.

The output options in Online Surveys allow for additional data to be output that is useful for reporting back to the DMOs and for descriptive statistics. Thus the following 'customise export' options were selected for the output data: -

- **Include unique response number for each respondent:** This includes the response IDs in the first column of the exported file.
- **Include date of response submission:** This includes the date that each response was submitted in the final column of the exported file (the time of the response was not considered necessary).
- **Use alternative question text (if provided):** If you have provided alternative question text in the Advanced options of any of your questions, ticking this box will mean that the exported file will contain the alternative text instead of the full question text.

The software allows for coded output and the following selections were made: -

- **Code responses (for import into statistical software):** This should only be ticked if you will be importing the file into a specialised statistical analysis software package. If you will be manipulating the data in Excel, ticking this box will convert the data to a format that you may find difficult to work with.
- **Combine scale/rank values into a single column where possible:** The scale/rank question allows multiple values to be selected per row. By

default, the coded export for a scale/rank question uses multiple columns for the response data. Where your scale/rank question has been restricted so that only one value is permitted per row, selecting this option condenses the response data into a single column.

5.6.2 Missing data values

It is recommended in the guidelines by Hair et al. (2017) that the missing value of any indicator variable was replaced with the mean of valid values of that indicator. The benefit of this approach is that it does not alter the sample size and the mean value of variables in the sample is unaffected. However, mean replacement also decreases the variability in the data and the estimated path coefficients in PLS-SEM and is likely to decrease the possibility of finding meaningful relationships.

There were 155 occurrences where statement responses in the data were not assigned a value and treated as missing data – see Section 5.6.3.1. The missing values were accounted for by replacing the mean of valid values of the indicator where the missing values occurred (Hair et al. 2017). Three constructs were affected by missing values, DSI, CDA and DM, and the missing values represented between 6% and 7% of the data collected for those constructs – an acceptable margin (Hair et al. 2017).

5.6.3 Merging, reformatting and coding the data

Online surveys also allow a data file to be output for each survey – the number of rows for the data file was checked to ensure that the same data was output for each DMO before the actual data files were merged.

The same format was used for each DMO output and all records merged into one file and saved in a comma separated value (csv) file containing 157 records. The csv file was then imported into SPSS. SPSS was used in order to reassign values for certain statements, provide missing values and calculate variables using syntax commands. The data was coded for the three unobservable variables – EMO, ADT, and AUDT.

5.6.3.1 Adoption and use of digital marketing technology

The use of applications was divided into three types – digital channels used, paid digital applications and digital analysis application. The usage of each type was measured with three options where only one option could be selected: -

1 Have and use
2 Have and do not use
3 Do not have

This was recoded is SPSS so that positive answers of have and use have the higher value of 3. The options were the same for all 15 of the measurement items and were all recoded accordingly as they were all positive statements (see Appendix D Table A).

The statement variables for three of the first order constructs that define the use of digital marketing technology (customer data storage and integration, customer data analysis and decision making) were provided with 5 options in order to measure as accurately as possible the use of digital marketing technology. An example of one of the statements from Data, Storage and Integration is as follows: -

Customer data from different marketing activities are stored in a customer database

1 Always
2 Mostly
3 Partly
4 Not at all
5 Unsure

This was recoded is SPSS so that positive answers have higher value (always was coded as 4, mostly as 3 and so on) and Unsure was recoded as a missing value (-999). The options were the same for all 15 of the measurement items and were all recoded accordingly as they were all positive statements (Appendix D Table B).

Five additional variables were created through summing the total of the digital channels, applications, hours spent on digital marketing technology and digital marketing technology investment (Appendix D Table C).

5.6.3.2 Attitude towards digital marketing technology

The statement variables for the four constructs that define attitude towards digital marketing technology (awareness, knowledge, experience and perceived value) were provided with 6 options in order to measure attitude as accurately as possible. An example of one of the statements from Awareness is as follows: -

I seek out new forms of digital marketing technology when I need to

1 Strongly agree
2 Agree
3 Somewhat agree
4 Somewhat disagree
5 Disagree
6 Strongly disagree

This was recoded is SPSS so that positive answers have a higher value (strongly agree was coded as 6, agree coded as 5 and so on). The options were the same for all 20 of the measurement items and were all recoded accordingly as they were all positive statements (Appendix D Table D).

5.6.3.3 Entrepreneurial marketing orientation

The statement variables for the seven first order constructs that define Entrepreneurial Marketing Orientation – EMO - (customer intensity, value creation, attitude towards risk, resource leveraging, opportunity focus and proactivity) were provided with 6 options in order to measure attitude as accurately as possible. An example of one of the statements from Customer Intensity is as follows: -

Customers are communicated with before, during and after their experience with us

1 Strongly agree
2 Agree
3 Somewhat agree
4 Somewhat disagree
5 Disagree
6 Strongly disagree

This was recoded in SPSS so that positive answers have a higher value (strongly agree was coded as 6, agree coded as 5 and so on). The options were the same for 34 of the measurement items, including both of the two reflective statements that

represent EMO (last two rows of Table E, Appendix D). All responses were recoded in the same way, as they were positive statements.

The one exception was the following risk statement: -

Our marketing activities tend to be low risk

1 Strongly agree
2 Agree
3 Somewhat agree
4 Somewhat disagree
5 Disagree
6 Strongly disagree

For this measurement item the values remained as per the output from the Online Surveys application where strongly agree was coded as 1, agree as 2 and so on (Appendix D Table F).

5.7 Conclusion

This chapter provided an overview of the philosophical stance of positivism and a deductive methodological perspective for the study using a quantitative survey method for data generation. The chosen data analysis approach was discussed, and an outline given of the analysis model development. Finally, the chapter described the way the data was collected and processed for analysis and the findings are presented in chapter 6.

CHAPTER 6

ANALYSIS AND FINDINGS

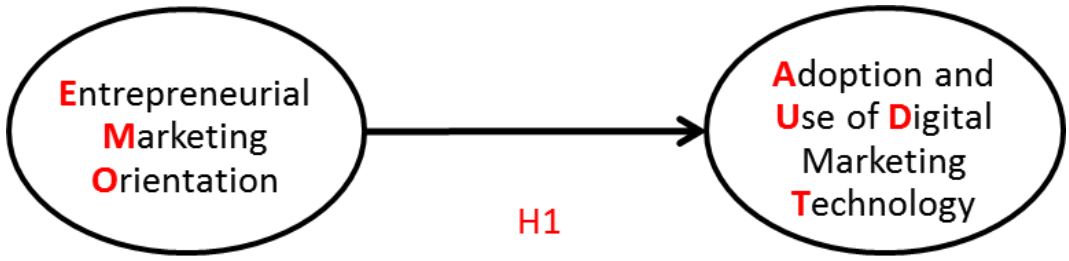
6.1 Introduction

This research explores the influence of an entrepreneurial marketing orientation (EMO) on the adoption and use of digital marketing technology (AUDT) within the context of the owner-managers of small tourism businesses (STBs) and their attitude towards digital marketing technology (ADT). The chapter begins with a detailed explanation of the analysis process used, modelling the direct and indirect (mediated) relationships between the first order constructs of an EMO, ADT and AUDT. The final model analyses the construct relationships at the second order level and the chapter closes with a summary of the findings discussed in chapter 7.

6.2 The analysis process

The analysis process begins with the relationship between the concepts of an owner-manager's EMO and the AUDT in STBs (Figure 6.1).

Figure 6.1: Model demonstrating EMO and AUDT construct relationship and hypothesis

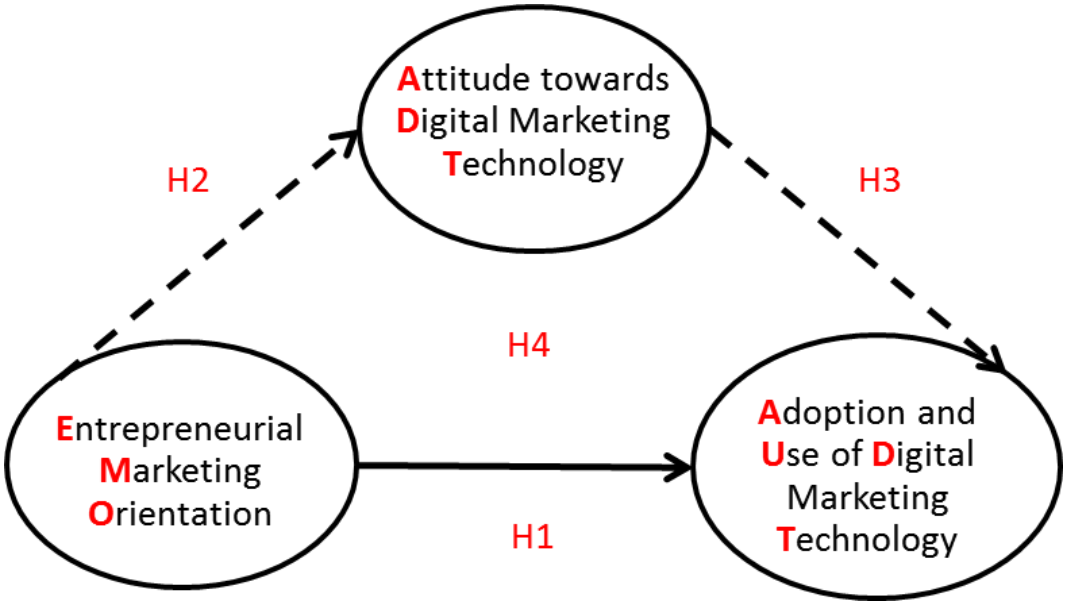


The concept relationships that are being tested may be extended by including additional variables. Additional variables may be added in a linear fashion i.e. independent variable 1 → independent variable 2 → dependent variable or may have multiple relationships with numerous variables, therefore it is important to identify how the variables are connected (through relationships) in a structural analysis model. Supplementary independent variables may mediate the relationships between two variables in a structural model and, from a theoretical

perspective, explore why a relationship between two constructs exists. In this study, the mediating construct is attitude towards digital marketing technology (ADT).

It is accepted that AUDT can take place without the STB owner-manager having an EMO. Therefore, there may be some other explanation for the occurrence of AUDT in STBs. In this study, ADT is posited as a mediating factor between EMO and AUDT and the mediated relationship is shown in Figure 6.2.

Figure 6.2: Structural model showing EMO, ADT and AUDT construct relationships

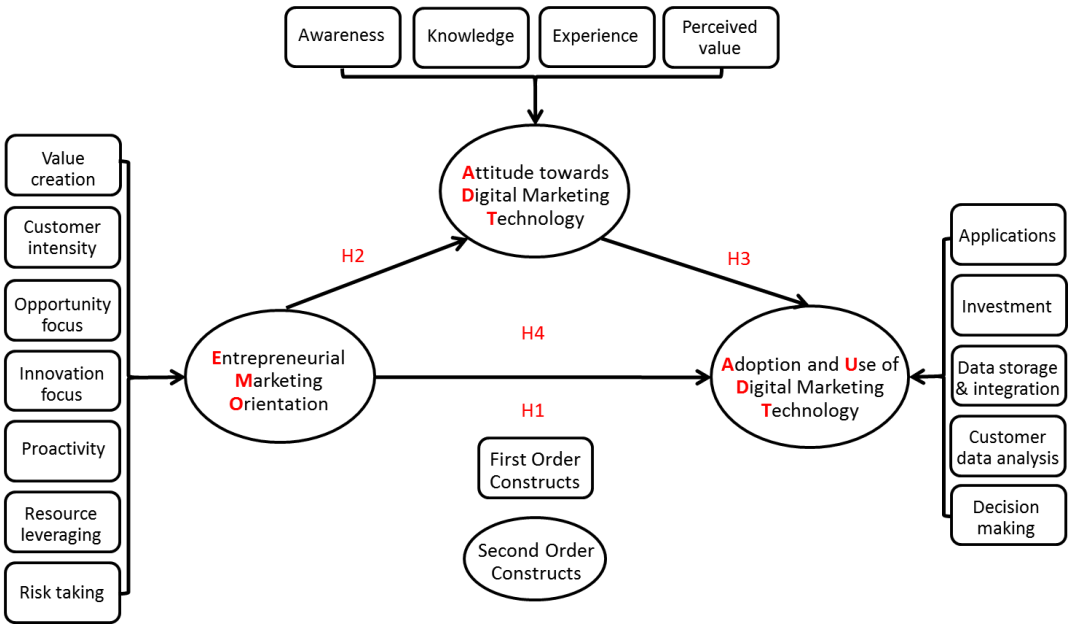


The arrows in Figure 6.2 indicate the possible direct and indirect relationship between an EMO and AUDT. The EMO and AUDT relationship may be explained by the direct sequence (unbroken arrow), or the indirect sequence (shown as dotted line arrows), or by both sets of relationships.

In order to estimate the relationships between the constructs in Figure 6.2, the analysis model is taken to a lower, more granular level that includes the constituent elements of the three latent variables. The simple three construct model is changed by adding their first order constructs – 7 for EMO, 4 for ADT and 5 for AUDT as shown in Figure 6.3. The reason for this is to assign a numerical value for each first order construct as a proxy for the concept being measured. The proxy values

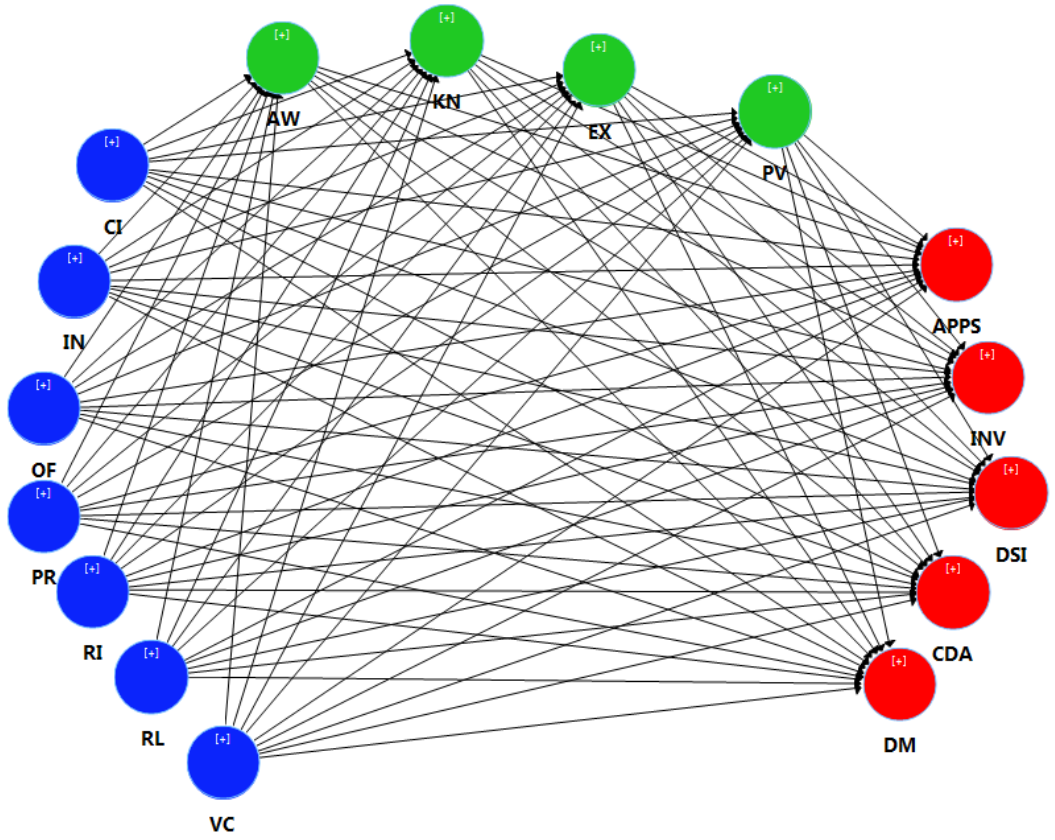
then, in turn, represent EMO, ADT and AUDT as composite variables at a second order level to evaluate their causal relationships. This conceptual model requires multivariate analysis, previously discussed in chapter 5 section 5.3 (p.103).

Figure 6.3: EMO, ADT and AUDT first order and second order conceptual model



The analysis models were built using SmartPLS™ and at the initial stage the analysis model does not include the second order constructs as they are replaced by the elements that form them. As a consequence of replacing the three second order constructs with 16 first order constructs, the model becomes complex, with multiple variables to measure, each first order construct is linked to the other first order constructs, so there are many more relationships to estimate, analyse and understand. In Figure 6.4, the first order constructs of EMO are represented as circles on the left of the model (CI customer intensity, IN innovation focus, OF opportunity focus, PR proactivity, RI risk management, RL resource leveraging and VC value creation). The constructs for ADT are at the top of the model (AW awareness, KN knowledge, EX experience and PV perceived value) and for AUDT, (APPS digital marketing applications, INV digital marketing investment, DSI customer data storage and integration, CDA customer data analysis and DM decision making) they are on the right of the model.

Figure 6.4: SmartPLS™ first order construct model relationships



The first order research model demonstrates the relationships (with single-headed arrows →) between the underlying elements that make up each of the three constructs (EMO, ADT and AUDT). In this model, it was possible to organise the range of variables (constructs) and their measurement items (indicators) to estimate their causal relationships and this was done in sequential order.

The indicators for each of the first order constructs are not shown in Figure 6.4 but are given in Table 6.1 for EMO, Table 6.2 for ADT and Table 6.3 for AUDT below. Table 6.1 also includes two summative statements reflecting the EMO construct for redundancy analysis (see Section 6.10.1).

Table 6.1: EMO construct measurement scale items

Construct	Model Item	Measurement Item
Customer Intensity **(CI)**	CICommunicate	Customers are communicated with before, during and after their experience with us
	CIMktgBuildCRM	Relationships with customers are built through our marketing activities
	CIReflectCustWants	The marketing activities of this business reflect the knowledge of what our customers want
	CIResponseTarget	There are response time targets for customer enquiries
	CIUseCustProfile	Customer profiles, created from data, are used to develop marketing communication
Innovation Focus **(IN)**	INDigitalChangeMktg	Digital technology has changed our marketing activities
	INLearnThruFailure	I accept that failure can contribute to learning for the future
	INMktgWillChange	I believe that our marketing activities will change in the future
	INTryImproveService	I am always looking at ways to improve the services this business provides
	INTryNewIdeas	I frequently try new ideas to differentiate what the business offers
Opportunity Focus **(OF)**	OFAlwaysPursue	I pursue marketing opportunities regardless of money and resource constraints
	OFIdentifyThruDigital	I use analysis tools and applications to identify new marketing opportunities
	OFReactToCompetition	I react to changes in competitor marketing activity
	OFRespondUnpredicted	I respond quickly to take advantage of unpredictable market events
	OFUseMktKnowledge	My market knowledge helps me to identify new opportunities
Proactivity **(PR)**	PRGoExternal	I look outside existing customers for new opportunities
	PRGuideExperience	I actively seek to guide customer experiences
	PRReviewCompetitors	I review marketing activities of competitor businesses
	PRReviewMktg	Reviewing our marketing activity is necessary to grow the business
	PRUptodateIndustry	I keep up to date with tourism industry developments
Risk Management **(RI)**	RIBenefitWillInvest	If I know what the benefits of new technology are, I will invest in it
	RIDataSecurity	Customer data security is a risk for this business
	RIMktgLowRisk	Our marketing activities tend to be low risk
	RIRiskToImprove	It is necessary to take risks to improve the service we provide
	RISpendUncertainty	In uncertain times, I spend more on marketing

Table 6.1: EMO construct measurement scale items continued

Construct	Model Item	Measurement Item
Resource Leveraging **(RL)**	RLDigitalStaff	Our staff have digital marketing skills that I am able to use when I need to
	RLUseAllData	I use all the customer data available to me for marketing decisions
	RLUseNetwork	I use my business network to develop new ideas for customer marketing
	RLWiderNetwork	I am open to working with a wider network outside the tourism industry
	RLWorkinLimits	I always work within the limits of what is available to me for marketing decisions
Value Creation **(VC)**	VCChangeForValue	I change suppliers or partners when necessary to create value for customers
	VC CompAdvantage	Our service provides customer value that gives us a competitive advantage
	VCCustDriveMktg	Marketing activity is driven by information from our customers
	VCDataToImprove	Using customer data from digital marketing communication improves the service we offer
	VCDataToInsight	I focus on turning customer data into insight to create a better customer experience
Reflective EMO Statements	REFDataInsightGrowth	I use customer data to gain insight to create customer value and opportunities for growth
	REFNewMktgLeader	Trying brand new marketing ideas before my competitors helps me to learn even if they do not work out

Table 6.2: ADT construct measurement scale items

Construct	Model Item	Measurement Item
Awareness **(AW)**	AWBenefits	I am aware of the benefits of using digital marketing technology
	AWCustomerPref	I am aware of my customers preferred digital communication channels
	AWKeepUp	I keep up with developments of new digital marketing
	AWSeekNew	I seek out new forms of digital marketing technology when I need to
	AWToolsAvailable	I am aware of the digital tools available to me for marketing communication
Experience **(EX)**	EXConfidentNew	I am confident using digital marketing technology that is new to me
	EXCreateOpps	I have created new marketing opportunities using digital technology
	EXTrial	I try new digital marketing applications before I buy into them
	EXUseDecisions	I draw upon personal experience for all my digital marketing communication decisions
	EXUsedifferent	I am experienced in using different digital marketing technologies
Knowledge **(KN)**	KNContribute	I know the contribution that digital marketing technology makes to the bottom line
	KNEasyLearn	Learning about new digital marketing technology is easy for me
	KNMeasureROI	I know how to measure the return on my investment in digital marketing technology
	KNNewCustomers	Using digital marketing technology provides access to new customers
	KNUseProven	I am reluctant to use new digital marketing technology until I know its benefits to the business
Perceived Value **(PV)**	PVDataEasyManage	Customer data from digital channels is easier to manage than other forms of customer data
	PVEasyCRM	It is easy to build customer relationships using digital technology
	PVExtraCosts	There are additional business costs that come from using digital marketing technology
	PVImportanceGrow	Digital technology is growing in importance for marketing communication for this business
	PVImprovesMCQual	Digital technology improves the quality of our marketing communication

Table 6.3: AUDT construct measurement scale items

Construct	Model Item	Measurement Item
Digital Applications **(APPS)**	DigitalChannels	Digital Marketing Applications
	DigitalAnalysis	Digital Marketing Analysis Applications
	DigitalPaid	Paid Digital Marketing Channels
Investment **(INV)**	Digital_Invest	Monetary investment in digital marketing technology
	HoursValue	Value of time invested in digital marketing technology
Customer Data Storage and Integration **(DSI)**	DSIAnalysisLink	Digital marketing channels are linked to analysis tools to track online customer behaviour
	DSIDataSummary	Customer data summaries are visualised for each of the digital marketing channels we use
	DSIIntegrate	Our online booking system provides revenue data from different digital channels
	DSIRevByChannel	Customer data generated from different digital channels are integrated with other systems
	DSIStoredb	Customer data from different marketing activities are stored in a customer database
Customer Data Analysis **(CDA)**	CDACustDataAnalysis	Customer data from digital marketing channels is analysed
	CDAInformTargets	Customer data analysis is used to inform customer targeting
	CDALatestCustInfo	Digital marketing channel data are analysed for the latest customer information
	CDAMarketInfoWeb	Market information (e.g. prices, competitors, industry) is accessed using the internet
	CDATestMarketing	Digital marketing campaigns are tested to maximise customer response
Decision Making **(DM)**	DMContent	New or updated content on digital channels is informed by customer data
	DMDaily	Digital customer data guides day-to-day marketing communication activities
	DMPlanning	Digital customer data is used for marketing communication planning
	DMResponsive	Our marketing communication is responsive to online customer behaviour
	DMUseFeedback	Customer feedback from digital channels is used to improve our service

6.3 The PLS-SEM algorithm

The PLS-SEM algorithm estimates the path coefficients and parameters of the model by maximising the explained variance of the dependent construct or variable – in other words by minimising the unexplained variance (Hair at al. 2017). The algorithm takes the empirical data from the indicators to determine a number of statistics.

Constructs are scored and the path coefficients calculated to indicate the direct effect of a variable that is assumed to cause an effect on a different variable. The path coefficient indicates the direct effect that a variable has (i.e. the cause) on another variable (i.e. the effect). In SmartPLS™, the effect of the path coefficient is interpreted if the exogenous variable changes by 1 standard deviation, then the endogenous variable changes by the value of the positive or negative path coefficient (Hair et al. 2017). Indicators are also given weights and loadings to ensure their relevance to measure what they are intended to measure. In addition, other statistics such as R^2 are used to estimate the change in endogenous variables when they are related to exogenous variables – the higher the value the better the explanation. The f^2 effect statistically estimates the relative impact of an independent (exogenous) variable on a dependent (endogenous) variable (Hair et al. 2017).

6.4 EMO and AUDT measurement model analysis

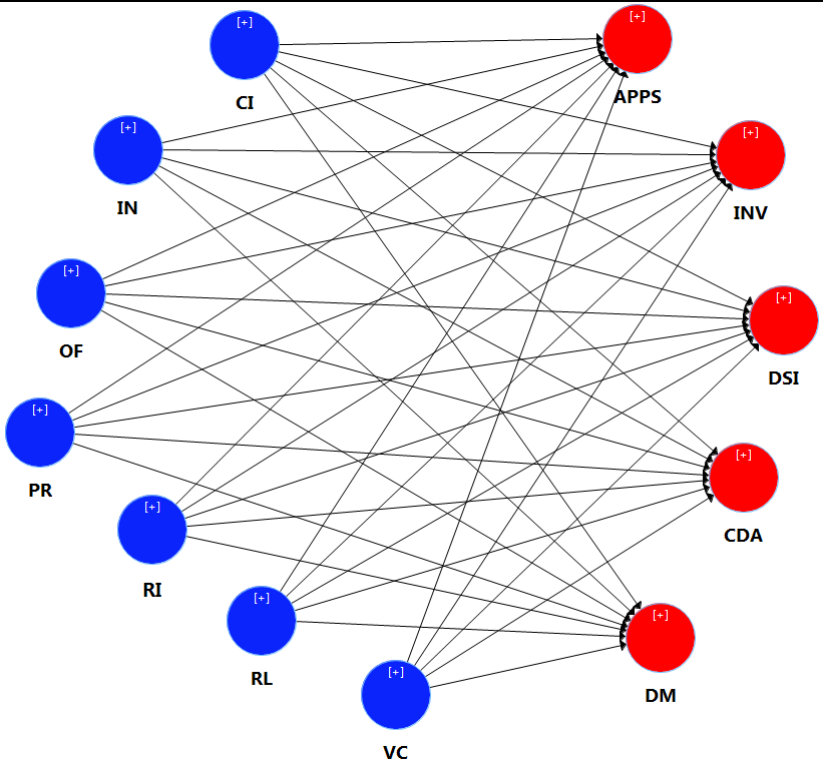
Accurate estimation of the latent variables or second order constructs (EMO, ADT and AUDT) is key to this research so the analysis model is built in sequence. The initial consideration is the direct causal relationship between an EMO and the AUDT in STBs. The direct relationships between the latent variables that represent EMO and AUDT are created to assess the representation of the indicators on each construct and the significance of those relationships in a measurement model.

The evaluation of reflective measurement models in PLS-SEM is done through convergent validity, internal reliability consistency and discriminant validity. Convergent validity measures the extent to which an indicator of a construct,

positively correlates with alternative indicators of the same construct. Convergent validity is monitored through the average variance explained (AVE) and the outer loadings of the indicators. The AVE is a measure of communality of the indicators and where a value of 0.5 or lower is recorded, that is an indication that, on average, there is more variance in the error of the indicators than in the variance explained by the construct (Hair at al. 2017). The outer loadings also assess convergent validity by determining the indicator's absolute contribution in explaining the construct it is assigned to (Hair et al. 2017). Outer loadings were systematically removed if they were above the recommended threshold of 0.708 with 0.7 considered acceptable (Hair et al. 2019).

The measurement model was created in SmartPLS™ with the relationships between each of the seven constructs of EMO and the five constructs of AUDT. This model reflects the initial exploratory position that each EMO exogenous (independent) construct has a significant causal relationship with every endogenous (dependent) AUDT construct. Figure 6.5 shows the first order constructs with abbreviated labels in the model building process (column 2 in Tables 6.1 and 6.3), however, the indicators are not shown.

Figure 6.5: EMO and AUDT measurement model in SmartPLS™



After each adjustment, the model was checked to ensure the remaining outer loadings met the criteria and the AVE was monitored to establish that the measurement indicators for each construct were reliable. The Fornell-Larcker (1981) method is based on a construct sharing more variance with its indicators than with any other construct. Specifically, their guidelines regarding validity confirm that the square root of the AVE of each construct is greater than its highest correlation with any other construct (Hair et al. 2017). The AVE tests exceeded the acceptable limit of 0.5 as all constructs were above 0.6 (Table 6.4).

Internal consistency reliability was evaluated through Cronbach's Alpha and composite reliability. As discussed in chapter 5 (section 5.3.3.4), using both these measures concurrently helps to counteract their individual limitations. In PLS-SEM, Cronbach's Alpha is a conservative measure of the internal consistency reliability of a construct that assumes equal indicator loadings. Cronbach's Alpha is estimated because all the constructs have more than one measurement indicator and the results range from 0.722 to 0.912 except for Investment (INV 0.687) that only has two indicators.

Composite reliability is a measure of internal consistency reliability where assumptions are not made regarding equal indicator loadings. According to Hair et al. (2017), values are within the range of 0 and 1, with higher values indicating higher reliability and, values between 0.6 and 0.7 in exploratory research, are also considered acceptable. The results in Table 6.4 are considered satisfactory for exploratory research according to Hair et al. (2017) as the values are all above 0.8.

Table 6.4: Validity and reliability assessment of the EMO AUDT measurement model

Construct	Average Variance Extracted	Cronbach's Alpha	Composite Reliability
Customer Intensity	0.779	0.722	0.876
Innovation Focus	0.618	0.847	0.890
Opportunity Focus	0.850	0.912	0.944
Proactivity	0.643	0.861	0.900
Risk Management	0.684	0.768	0.866
Resource Leveraging	0.698	0.784	0.874
Value Creation	0.683	0.769	0.866
Applications	0.729	0.813	0.889
Investment	0.787	0.864	0.917
Customer Data Storage and Integration	0.743	0.823	0.896
Customer Data Analysis	0.664	0.831	0.888
Decision Making	0.761	0.687	0.864

Discriminant validity is the final criterion for measurement model evaluation and determines the extent to which a construct is distinct from other constructs within the measurement model. Discriminant validity is estimated by the correlation with other constructs and is calculated using three methods – cross loadings, the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio, to confirm that there is sufficient discriminant validity between the constructs. Cross loadings demonstrate an indicator's correlation with other constructs within the model. The Fornell-Larcker criterion is a measure of discriminant validity, where the square root of each constructs AVE is compared with its correlations with all the other model constructs. HTMT is an estimate of what the correlations between the constructs would be if they were perfectly measured and is a mean of all the correlations of all the indicators across all the constructs. The Fornell-Larcker criterion for calculating discriminant validity values are given in Table 6.5.

Table 6.5: Fornell-Larcker discriminant validity – EMO and AUDT constructs

	APPS	CDA	CI	DM	DSI	IN	INV	OF	PR	RI	RL	VC
APPS	**0.854**											
CDA	0.632	**0.887**										
CI	0.407	0.543	**0.883**									
DM	0.588	0.815	0.512	**0.862**								
DSI	0.601	0.755	0.463	0.751	**0.815**							
IN	0.380	0.409	0.497	0.462	0.371	**0.786**						
INV	0.463	0.501	0.276	0.448	0.442	0.325	**0.872**					
OF	0.446	0.529	0.551	0.532	0.448	0.715	0.335	**0.922**				
PR	0.444	0.525	0.508	0.515	0.443	0.799	0.291	0.801	**0.802**			
RI	0.495	0.536	0.495	0.485	0.457	0.614	0.292	0.575	0.629	**0.827**		
RL	0.474	0.598	0.518	0.631	0.540	0.588	0.308	0.677	0.682	0.476	**0.835**	
VC	0.486	0.667	0.647	0.661	0.553	0.627	0.393	0.610	0.626	0.558	0.749	**0.827**

The figures on the diagonal (in bold) represent the square root of the construct AVE and the correlations of the other constructs are given below the figure in bold at the top of each column. The square root of the AVE for IN is 0.786 and is exceeded by the PR correlation (0.799) indicating that the constructs of PR and IN are not sufficiently distinct.

The HTMT ratio is recommended as a further evaluation for discriminant validity and shows the between trait correlations to the within-trait correlations. Statistically, correlations that are higher than 1, indicate a lack of discriminant

validity and the HTMT results are shown in Table 6.6. The HTMT correlations highlight a number of discriminant validity issues with a number of values of 0.9 or above. The cross loadings of the measurement indicators for all constructs were also checked.

Table 6.6: EMO and AUDT heterotrait-monotrait discriminant validity

	APPS	CDA	CI	DM	DSI	IN	INV	OF	PR	RI	RL
APPS											
CDA	0.755										
CI	0.520	0.675									
DM	0.715	0.960	0.656								
DSI	0.729	0.887	0.588	0.900							
IN	0.434	0.453	0.602	0.542	0.419						
INV	0.615	0.651	0.378	0.593	0.584	0.417					
OF	0.512	0.595	0.677	0.613	0.509	0.790	0.423				
PR	0.520	0.596	0.631	0.605	0.515	0.928	0.371	0.908			
RI	0.626	0.657	0.641	0.609	0.571	0.749	0.401	0.685	0.765		
RL	0.579	0.720	0.683	0.781	0.666	0.701	0.405	0.802	0.820	0.611	
VC	0.614	0.807	0.858	0.827	0.687	0.772	0.536	0.727	0.761	0.726	0.950

Using the three discriminant validity calculations to evaluate the constructs resulted in some relatively high correlation results, subsequently six constructs were merged and renamed into three new constructs as follows: -

Customer Insight and Value Creation → Customer Value (CV)

Opportunity Focus and Proactivity → Opportunity Creation (OC)

Customer Data Analysis and Decision Making → Data Insight (DI)

However, merging constructs cannot be done arbitrarily and some theoretical justification is required. Value creation and the customer are inextricably linked within the context of entrepreneurial marketing. The definition of value creation by Morris et al. (2003) infers that understanding customers is at its core, whilst the definition of customer intensity is based on actual knowledge of the needs of the customer and how those needs change. The organisation and the customer co-create value propositions (Morrish 2011; Whalen and Akaka 2016) and the role that the customer plays is to provide data through interactions and feedback with the on-going assessment of needs by the organisation (Morris and Lewis 1995). Hills et al. (2011) and Miles and Darroch (2006) confirm that businesses with an

entrepreneurial approach to marketing grow customer value through relationships and other entrepreneurial traits such as innovativeness and creativity.

Opportunity focus and proactivity showed evidence of correlation as opposed to being distinct constructs of an EMO. The rationale behind merging these two constructs is based on their definitions and the ways that the constructs are often combined in discussions despite having alternative but only slightly different meanings. Opportunity focus is the creative pursuit of an opportunity for a competitive advantage through environmental scanning and proactivity is the continuing search for ways to achieve a competitive advantage through actions taken to change marketing practice (Morris et al. 2003). Proactivity refers to the creation or control of a situation rather than just a response after it has happened. Opportunity focus is not simply a response to a situation or phenomena but a way of creating something new as a result.

Both characteristics refer to actions taken to gain a competitive advantage by finding new ways of working and being creative. In fact the acknowledged opportunity recognition process (Ardichvilli 2003, Hills et al. 2008; Morrish et al. 2010) encompasses opportunistic behaviours in general i.e. thinking and acting – being proactive, according to Hills and Hultman (2013) and these behaviours require imagination, vision, cleverness and originality (Morris et al. 2003). Renton et al. (2015) argue that small business success is grounded in opportunity creation and this is influenced by proactivity, exploration and exploitation, leading to the development of e-business in small firms (Fillis and Wagner 2005).

By merging the customer data analysis and decision making constructs, there is an acknowledgement of the small business literature that recognises the closeness of the relationship between the business owner-manager and his or her customers, (Gilmore 2011; O'Dwyer and Gilmore 2013). Decision making is rather informal with haphazard development of the business in small businesses (Gilmore 2001; Getz and Carlsen 2005) and, it is the size of the organisation and those close customer relationships that allow for flexibility in small businesses (Moriarty et al. 2008). Decision making by small business owners is characterised by the speed at which it happens (Collinson and Shaw 2001; Murray et al. 2002) and digital

marketing technology can intensify the customer relationship and the speed to which data can be responded to when it is analysed for insight.

Merging these constructs improved the model's performance in terms of construct validity, reliability and loadings, whilst retaining enough indicators to reflect the construct (Hair et al. 2017). The validity and reliability of the constructs in the revised measurement model are given in Table 6.7 using the template from Hair et al. (2017, p.132).

Table 6.7: Results summary for the EMO and AUDT measurement model

Latent Variable	Indicators	Convergent Validity			Internal Consistency Reliability	
		Outer Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's Alpha
		>0.70	>0.50	>0.50	0.60 - 0.90	0.60 - 0.90
APP	DigitalAnalysis	0.898	0.806	0.729	0.889	0.813
	DigitalChannels	0.869	0.755			
	DigitalPaid	0.791	0.626			
INV	Digital_Invest	0.844	0.712	0.760	0.863	0.687
	HoursValue	0.899	0.808			
DSI	DSIAnalysisLink	0.858	0.736	0.664	0.888	0.831
	DSIDataSummary	0.779	0.607			
	DSIIntegrate	0.823	0.677			
	DSIStoredb	0.798	0.637			
DI	CDACustDataAnalysis	0.837	0.701	0.695	0.931	0.910
	CDAInformTargets	0.890	0.792			
	CDATestMarketing	0.818	0.669			
	DMDaily	0.857	0.734			
	DMPlanning	0.903	0.815			
CV	CIMktgBuildCRM	0.802	0.643	0.596	0.880	0.830
	CIReflectCustWants	0.700	0.490			
	VCChangeForValue	0.738	0.545			
	VCCustDriveMktg	0.847	0.717			
	VCDataToInsight	0.765	0.585			
IN	INDigitalChangeMktg	0.749	0.561	0.618	0.890	0.847
	INLearnThruFailure	0.796	0.634			
	INMktgWillChange	0.818	0.669			
	INTryImproveService	0.826	0.682			
	INTryNewIdeas	0.739	0.546			
OC	OFReactToCompetition	0.857	0.734	0.652	0.937	0.923
	OFRespondUnpredicted	0.868	0.753			
	OFUseMktKnowledge	0.872	0.760			
	PRGoExternal	0.766	0.587			
	PRGuideExperience	0.792	0.627			
	PRReviewCompetitors	0.830	0.689			
	PRReviewMktg	0.701	0.491			
	PRUptodateIndustry	0.758	0.575			
RI	RIBenefitWillInvest	0.822	0.676	0.683	0.866	0.768
	RIRiskToImprove	0.858	0.736			
	RISpendUncertainty	0.799	0.638			
RL	RLDigitalStaff	0.763	0.582	0.698	0.873	0.784
	RLUseAllData	0.879	0.773			
	RLUseNetwork	0.859	0.738			

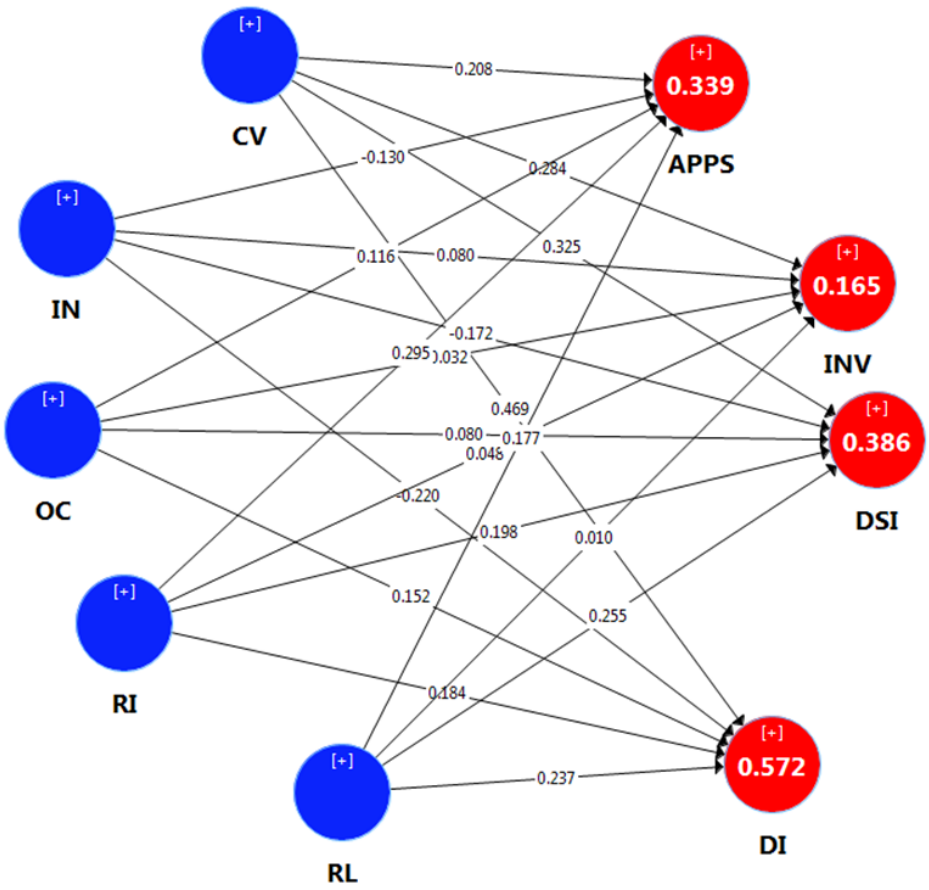
Cross loadings were checked again to ensure that none of the indicators loaded higher on other constructs than their intended one. All the reflective measurement items of the remaining constructs met the outer loading recommended threshold of

0.7 (Navarro et al. 2011; Hair et al. 2017), although two items were slightly below the 0.708 threshold recommended by Hair et al. (2017) but were acceptable at 0.7 (Hair et al. 2017). The AVE of each construct also exceeded the recommended value of 0.5 (Nunnally 1978; Fornell and Larcker 1981; Navarro et al. 2011; Hair et al. 2017). Two constructs have somewhat high composite reliability scores but the Fornell-Larcker and HTMT measures had improved. However, it can be stated at this point that the values for the measurement items support the convergent validity of the indicators and can be used in a measurement scale for EMO and AUDT. They were settled upon to measure the structural relationships between their respective constructs.

6.5 EMO and AUDT structural model analysis

Having maximised the convergent and discriminant validity of the measurement model, the next analysis examines the significance of the relationships between the latent variables and relevance of the coefficients (Figure 6.6).

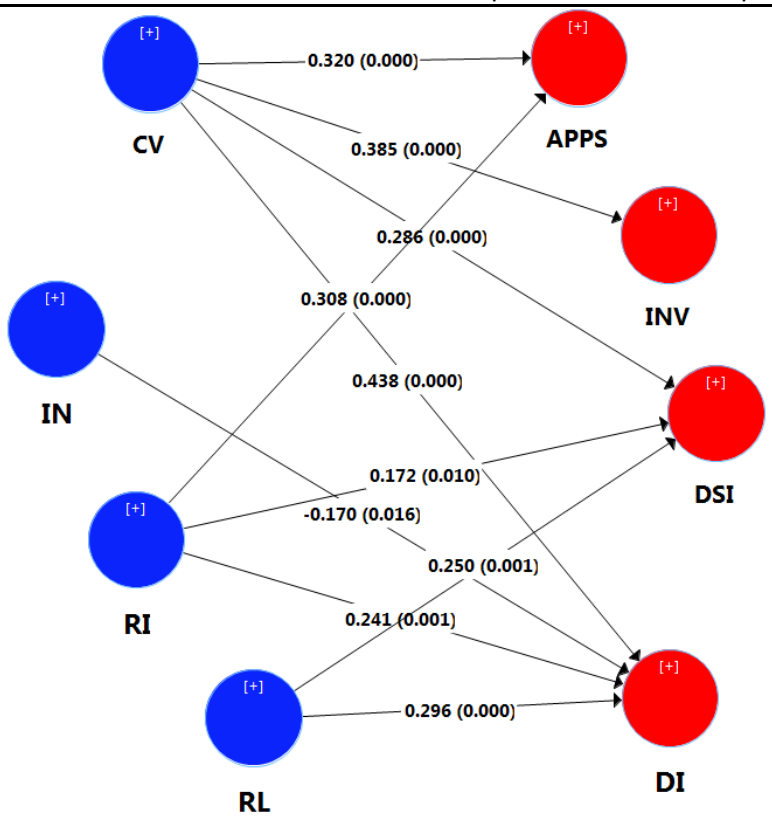
Figure 6.6: EMO and AUDT first order structural model with path coefficients and R^2



It is hypothesised that the EMO first order constructs have a direct and positive influence on the constructs of AUDT. The model in Figure 6.6 shows the 20 direct relationships between the first order constructs that were tested. The hypothesis tests considered the significance of *p* values with each of the direct relationships in the model. The direct relationships that were not significant were systematically removed starting with the highest values first and the model was run after each non-significant relationship was removed. In total, ten direct relationships were removed from the 20 relationships (in Figure 6.6) due to their *p* value varying between 0.830 and 0.112 and being above the widely accepted threshold of 0.05.

Following the bootstrapping procedure (see section 6.10.4, p. 201), the *p* values of the significant relationships were between less than 0.001 and 0.048 when conducting a two-tailed test. Two-tailed tests were used due to the exploratory nature of the research, and whilst they are a cautionary approach that reduce the analysis power of the model, they allow for both positive and negative effects. Consequently, the ten significant direct relationships remained in the model (Figure 6.7).

Figure 6.7: EMO and AUDT first order constructs with path coefficients and *p* values



The bootstrapping procedure for significance testing also resulted in the removal of the latent variable Opportunity Creation (OC) as it did not have any significant relationships with any of the AUDT first order constructs. Construct collinearity was checked using Variance Inflation Factors (VIFs) that quantify the severity of indicator collinearity and all values meet the desired threshold of less than 5 (specified by Hair et al. 2017). However, whilst this analysis can identify the significant relationships, it does not relate to their importance, consequently the structural model requires further evaluation for the effect of the predictor constructs starting with the path coefficients and VIFs.

The structural model path coefficients have standardised values between -1 and +1. Those path coefficients that are closer to +1 represent strong positive relationships (and vice versa for negative values); the closer the estimated coefficient to 0, the weaker the relationships. The path coefficient indicates the extent of the association between the exogenous and endogenous construct. If the path coefficient is statistically significant (i.e. the coefficient is significantly different to zero in the population), its value indicates the extent to which the exogenous construct is associated with the endogenous construct. The path coefficients (estimated path relationships) in the structural model for the EMO first order constructs (customer value - CV, innovation focus - IN, risk management – RI, and resource leveraging - RL) and AUDT first order constructs (digital marketing applications – APPS, digital marketing investment – INV, customer data storage and integration – DSI, and data insight – DI) are given in Table 6.8.

Table 6.8: EMO and AUDT path coefficients

		AUDT			
		APPS	**INV**	**DSI**	**DI**
EMO	**CV**	0.320	0.385	0.286	0.438
	IN				-0.170
	RI	0.308		0.172	0.241
	RL			0.250	0.296

The path coefficients consider the exogenous constructs that drive the constructs of AUDT in terms of importance according to their value. CV has the most importance on DI (0.438) followed by RL (0.296) and RI (0.241), whereas IN has a negative effect on DI (-0.170). CV is the only construct with relevance to INV

(0.385). CV and RI have relatively similar importance to APPS (0.320 and 0.308). CV and RL also have medium importance to DSI (0.286 and 0.250) and finally RI has the least importance on DI (0.172).

To evaluate the relevance of the exogenous constructs, the next step is the comparison of the relative sizes of the path coefficients (R^2), total effects, and the f^2 effect size. These analyses enable the identification of the key constructs that have the highest relevance to explaining the endogenous latent variable – AUDT. Specifically, R^2 values explain the variance in the endogenous variable, and f^2 analyses the relevance of the exogenous constructs of EMO in explaining AUDT.

The coefficient of determination represents the model's predictive power, and the coefficients represent the combined effects of the exogenous constructs on the endogenous construct. PLS-SEM analysis aims at maximising the R^2 values of the endogenous latent variable(s) in the path model. The R^2 values range from 0 to 1 and the higher the level, the higher the predictive accuracy. Hair et al. (2011; 2017) recommend R^2 values of 0.75 as substantial, 0.50 for moderate and 0.25 as weak when it comes to marketing research.

At this point, it is worth noting that selecting a model solely based on the R^2 value is inadvisable as the more paths from the exogenous constructs that point towards a target construct, the higher its R^2 value, whether the exogenous constructs are significant or not (Hair et al. 2017). Therefore, a higher R^2 value for a simple, parsimonious model is preferred. In addition, an adjusted R^2 can be used as a criterion to avoid bias towards complex models when comparing models with different exogenous constructs and/or different numbers of observations. The R^2 values were calculated again following the removal of the non-significant relationships and were slightly lower than those shown in Figure 6.6. DI at 0.541 is considered to be moderate, DSI and APPS moderately weak (0.377 and 0.312 respectively) and INV weak at 0.148.

The f^2 effect size is a measure used to assess the relevance of a predictor (exogenous) construct to explain an endogenous construct and is used to assess the

R^2 values. In other words, the f^2 effect size measures the substantive impact of the removal of a specified exogenous construct on an endogenous construct. The f^2 effect size allows assessment of the contribution from an exogenous construct to an endogenous construct's R^2 value. Guidelines for assessing the f^2 effect are that values of 0.02, 0.15, and 0.35 represent small, medium and large effects respectively (Cohen 1988). Less than 0.02 indicate that there is no effect. Results from the f^2 analysis are shown in Table 6.9.

Table 6.9: EMO and AUDT f^2 effect sizes

		AUDT			
		APPS	**INV**	**DSI**	**DI**
EMO	**CV**	0.098	**0.174**	0.053	**0.159**
	IN				0.030
	RI	0.091		0.031	0.071
	RL			0.047	0.086

CV has a medium effect size of 0.159 on DI and 0.174 on INV. In contrast, IN has a small effect on DI (0.030), with CV, RI and RL having a small effect on DSI (0.053, 0.031, 0.047). Slightly larger are the effect sizes of CV and RI on APPS (0.091 and 0.098) and RI and RL on DI (0.071 and 0.086). Therefore, there are some effects of EMO first order constructs on AUDT first order constructs, however none is considered large (Cohen 1988).

6.6 EMO and AUDT analysis model summary

At the start of measurement model analysis, there were 35 hypothesised direct relationships between the characteristics of an EMO and the AUDT. Model 1 tested the effect of the EMO characteristics on the elements of AUDT for marketing communication, summarised in Hypothesis 1: -

> Hypothesis 1: The characteristics of an EMO - (a) customer intensity CI; (b) innovation focus IN; (c) proactivity PR; (d) opportunity focus OF; (e) resource leveraging RL; (f) risk management RI; and (g) value creation VC - have a direct and positive influence on the components of AUDT - (i) the number of digital marketing applications adopted and used APPS; (ii) investment in digital marketing technology INV; (iii) customer data storage and

integration DSI; (iv) customer data analysis CDA; and (v) marketing decision making DM in STBs.

The measurement model was established as statistically valid through a number of modifications. The first series of iterations led to the removal of 16 indicators from customer intensity, opportunity focus, risk management, resource leveraging, value creation, customer data storage and integration, customer data analysis and decision making. Innovation focus was the only EMO construct retaining its original measurement items, and all the original AUDT indicators of digital marketing applications and investment were retained in the last iteration of the measurement Model 1. For the Model 1 modifications (and throughout the development of all three models) removing indicators was done whilst monitoring the substantive implications for the construct domain. For example, there were four indicators that were retained in the measurement model (see Appendix E) despite the fact that they loaded on four other constructs with values of over 0.5 and 0.6 (albeit lower than the direct loading on their own construct) - VCCustDriveMktg, CDACustDataAnalysis, CDAInformTargets and DMPlanning: -

VCCustDriveMktg - marketing activity is driven by information from our customers – this item directly links marketing activity to the usage of customer information.

CDACustDataAnalysis - customer data from digital marketing channels is analysed – because it confirmed that the business analysed customer data.

CDAInformTargets - customer data analysis is used to inform customer targeting – indicated the purpose of targeting customers as a reason why customer data is analysed – in other words, the actual use of customer data analysis.

DMPlanning - digital customer data is used for marketing communication planning – this indicator identified digital data informs marketing communications planning.

Merging the EMO constructs of opportunity focus and proactivity, and customer insight and value creation resulted in the removal of more indicators, leaving 16 from the original 35 remaining in the outer, measurement model. Because

customer data analysis and decision making were merged, more indicators were also removed from three AUDT constructs where 14 original indicators remained from 20 in the first measurement model.

When merging 4 exogenous constructs and 2 endogenous constructs in the measurement model, there was a reduction in the number of hypothesised relationships to 20. Bootstrapping was used to test the significance of these relationships resulting in ten significant direct relationships. The *p* values of the significant relationships between the first order constructs of EMO and AUDT were between less than 0.001 and 0.048 when conducting a two-tailed test (Figure 6.7, p.170). The direct relationships and path coefficients are given in Table 6.10.

Table 6.10: Construct significant and non-significant direct relationships

Exogenous construct		Endogenous construct	Significant?	Path Coefficient
CV	→	DI	**Yes**	0.438
CV	→	INV	**Yes**	0.385
CV	→	APPS	**Yes**	0.320
RI	→	APPS	**Yes**	0.308
RL	→	DI	**Yes**	0.296
CV	→	DSI	**Yes**	0.286
RL	→	DSI	**Yes**	0.250
RI	→	DI	**Yes**	0.241
RI	→	DSI	**Yes**	0.172
IN	→	DI	**Yes**	-0.170
IN	→	DSI	**No***	
IN	→	APPS, INV	**No**	
OC	→	APPS, INV, DSI, DI	No	
RI	→	INV	No	
RL	→	APPS, INV	No	

* IN → DSI relationship becomes significant (0.041) when conducting a one-tailed test

All the path coefficients essentially represent weak relationships as they are all below 0.5. The CV construct has the strongest relationships with all 4 AUDT constructs. DI and APPS are the AUDT constructs that are the next strongest associated endogenous constructs. The weakest associations are between RI and DSI and IN. DI has a weak association, and it is also a negative association (see Table 6.11).

Table 6.11: Effect sizes of significant relationships

Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
CV	→	DI	0.438	0.159	Medium	0.541	Moderate
CV	→	INV	0.385	0.174	Medium	0.148	Weak
CV	→	APPS	0.320	0.098	Small	0.312	Moderately weak
RI	→	APPS	0.308	0.091	Small	0.312	Moderately weak
RL	→	DI	0.296	0.086	Small	0.541	Moderate
CV	→	DSI	0.286	0.053	Small	0.377	Moderately weak
RL	→	DSI	0.250	0.047	Small	0.377	Moderately weak
RI	→	DI	0.241	0.071	Small	0.541	Moderate
RI	→	DSI	0.172	0.031	Small	0.377	Moderately weak
IN	→	DI	-0.170	0.030	Small	0.541	Moderate

Restating the results in terms of hypothesis 1 is as follows: -

- The relationship between Customer Value and Data Insight is significant. There is a medium effect explaining the relevance of Customer Value to Data Insight. There is a moderate impact on the variation of Data Insight gained as the importance of Customer Value increases.
- The relationship between Customer Value and Investment is significant. There is a medium effect explaining the relevance of Customer Value to Investment. However, there is only a weak effect on the variation for Investment in digital marketing technology as the importance of customer value increases.
- The relationship between Resource Leveraging and Risk Management with Data Insight is significant. There is a small effect explaining the relevance of Resource Leveraging and Risk Management to Data Insight. However, there is a moderate impact on the variation of Data Insight gained as the importance of Resource Leveraging and Risk Management increases.
- The remaining relationships between Customer Value and Risk Management and Applications; Customer Value, Resource Leveraging and Risk Management and Customer Data Storage and Integration have small effects.
- The relationship between Innovation and Data Insight is the only significant relationship that is negative, but it has the weakest association with a small effect and moderate variation when explaining Data Insight.
- There is no statistical significance between opportunity creation and the first order constructs of the adoption and use of digital marketing technology.

6.7 EMO, ADT and AUDT measurement model analysis

The next phase of the analysis was to estimate the impact of the owner-manager's attitude towards digital marketing technology (ADT). This involved introducing the four constructs that represent ADT as mediators – awareness (AW); knowledge (KN); experience (EX) and perceived value (PV) of digital marketing technology into the accepted measurement model. The conceptual basis for mediation is to explain why an observed relationship between two constructs exists and it helps to understand the mechanisms that underlie the relationships in the model (Hair et al. 2017).

Mediation is the effect of a change in the exogenous variable (EMO) that causes a change in the mediating variable (ADT), which, in turn, affects the endogenous variable in the model (AUDT). By establishing the relationship between the constructs of EMO and AUDT it is possible to use statistical tests to evaluate the hypothesis that ADT is a mediating variable by estimating the statistical relationships between all three constructs. This is done through the correlations between EMO and ADT, and ADT and AUDT and the latent variables that represent ADT were evaluated in the same way as the EMO and AUDT variables. However, because relationships are not always clear, a series of steps are followed to evaluate mediation using PLS-SEM.

The same analysis procedure used for the EMO and AUDT first order construct model is followed when the first order constructs of ADT are introduced to the measurement model as shown in Figure 6.4 (p. 164) and not just to the significant relationships in the structural model (Figure 6.6, p. 166). This is due to the requirement to see if previously insignificant direct relationships may become significant when they are fully or partially mediated. Consequently, the construct Opportunity Creation (OC) returns to the model in order to test its significance to AUDT through the mediating variables of ADT. The validity of the measurement items is assessed and once again, significant relationships are identified. The final stage of the modelling process is measuring the statistically significant relationships between the first order constructs of the three composite variables EMO, ADT and AUDT (Table 6.12).

Table 6.12: EMO ADT AUDT measurement model - validity and reliability assessment

Construct	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability
Customer Value **(CV)**	0.597	0.830	0.881
Innovation Focus **(IN)**	0.621	0.847	0.891
Opportunity Creation **(OC)**	0.639	0.887	0.914
Risk Management **(RI)**	0.684	0.768	0.866
Resource Leveraging **(RL)**	0.699	0.784	0.874
Awareness **(AW)**	0.747	0.829	0.898
Knowledge **(KN)**	0.675	0.840	0.893
Experience **(EX)**	0.796	0.914	0.940
Perceived Value **(PV)**	0.751	0.889	0.924
Applications **(APPS)**	0.728	0.813	0.889
Investment **(INV)**	0.758	0.687	0.862
Customer Data Storage and Integration **(DSI)**	0.664	0.831	0.888
Data Insight **(DI)**	0.758	0.920	0.940

Outer loadings were removed if they were greater than 0.7 to address convergent validity and the model met the required limits. The AVE of the constructs are greater than 0.5. Cronbach's Alpha values range from 0.768 to 0.920 with the exception of Investment (0.687) that only had two indicators. Composite reliability did however result in four construct values in excess of 0.9 but below 0.95. The consequence of composite reliability values above 0.95 is evidence that their indicators are measuring the same phenomenon and consequently unreliable as measures of the construct. Discriminant validity between the constructs was analysed through cross loadings, and Fornell-Larcker (Table 6.13) and HTMT (Table 6.14) were used to confirm sufficient discriminant validity between the constructs.

Table 6.13: Fornell-Larcker discriminant validity – EMO, ADT and AUDT constructs

	APPS	AW	CV	DI	DSI	EX	IN	INV	KN	OC	PV	RI	RL
APPS	**0.853**												
AW	0.493	**0.864**											
CV	0.498	0.612	**0.773**										
DI	0.634	0.583	0.680	**0.871**									
DSI	0.602	0.462	0.565	0.792	**0.815**								
EX	0.499	0.788	0.637	0.594	0.480	**0.892**							
IN	0.377	0.630	0.631	0.421	0.366	0.602	**0.788**						
INV	0.467	0.381	0.383	0.498	0.441	0.393	0.323	**0.871**					
KN	0.544	0.817	0.662	0.623	0.513	0.833	0.596	0.403	**0.822**				
OC	0.459	0.642	0.654	0.541	0.453	0.614	0.801	0.314	0.637	**0.799**			
PV	0.488	0.695	0.634	0.577	0.522	0.652	0.713	0.348	0.731	0.636	**0.867**		
RI	0.495	0.498	0.587	0.532	0.456	0.487	0.613	0.294	0.486	0.633	0.632	**0.827**	
RL	0.472	0.614	0.715	0.625	0.538	0.655	0.582	0.305	0.687	0.696	0.565	0.475	**0.836**

Table 6.14: Heterotrait-monotrait discriminant validity – EMO, ADT and AUDT constructs

	APPS	AW	CV	DI	DSI	EX	IN	INV	KN	OC	PV	RI	RL
APPS													
AW	0.588												
CV	0.602	0.731											
DI	0.732	0.665	0.771										
DSI	0.729	0.555	0.676	0.904									
EX	0.564	0.905	0.729	0.647	0.550								
IN	0.434	0.740	0.735	0.460	0.419	0.666							
INV	0.615	0.491	0.493	0.630	0.584	0.486	0.417						
KN	0.635	0.982	0.790	0.699	0.606	0.943	0.692	0.520					
OC	0.528	0.736	0.753	0.589	0.521	0.675	0.916	0.392	0.726				
PV	0.564	0.815	0.730	0.636	0.607	0.722	0.812	0.438	0.853	0.707			
RI	0.626	0.629	0.723	0.634	0.571	0.581	0.749	0.401	0.605	0.758	0.765		
RL	0.579	0.761	0.880	0.734	0.666	0.775	0.701	0.405	0.839	0.829	0.678	0.611	

Again, the cross loadings of measurement items were assessed by the number of high value cross loadings on other constructs and the value of each cross loading – starting with the highest in quantity and value first. Fornell-Larcker and HTMT results indicated that the IN construct was not sufficiently distinct to OC.

Checking the cross loadings again resulted in two latent variables merging into the Knowledge construct based upon cognition as an inherent part of attitude (Fishbein 1967): -

Awareness and Experience $\rightarrow$ integrated into Knowledge

A further 8 items were removed as a result of the outer loadings and cross loadings values, and another 6 due to their Variance Inflation Factors (VIFs).

As a consequence of these actions, the reflective measurement items of the remaining constructs all met the outer loading recommended threshold of 0.7 (Navarro et al. 2011; Hair et al. 2017). The AVE of each construct also exceeded the recommended value of 0.5 (Nunnally 1978; Fornell and Larcker 1981; Navarro et al. 2011; Hair et al. 2017). Two constructs have somewhat high composite reliability scores but the Fornell-Larcker measures were acceptable and HTMT measures had improved. The elements of the measurement model with ADT as a mediator are shown in Table 6.15.

Table 6.15: Results summary for the EMO ADT AUDT measurement model

Latent Variable	Indicators	Convergent Validity			Internal Consistency Reliability	
		Outer Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's Alpha
		>0.70	>0.50	>0.50	0.60 - 0.90	0.60 - 0.90
APPS	DigitalAnalysis	0.907	0.823	0.728	0.889	0.813
	DigitalChannels	0.868	0.753			
	DigitalPaid	0.779	0.607			
INV	Digital_Invest	0.837	0.701	0.759	0.863	0.687
	HoursValue	0.904	0.817			
DSI	DSIDataSummary	0.771	0.594	0.678	0.863	0.761
	DSIIntegrate	0.833	0.694			
	DSIStoredb	0.863	0.745			
DI	CDACustDataAnalysis	0.854	0.729	0.742	0.896	0.826
	CDATestMarketing	0.855	0.731			
	DMDaily	0.876	0.767			
KN	AWCustomerPref	0.809	0.654	0.691	0.899	0.851
	EXTrial	0.853	0.728			
	EXUseDecisions	0.823	0.677			
	KNMeasureROI	0.840	0.706			
PV	PVDataEasyManage	0.865	0.748	0.783	0.916	0.862
	PVEasyCRM	0.891	0.794			
	PVImprovesMCQual	0.899	0.808			
CV	CIMktgBuildCRM	0.823	0.677	0.636	0.875	0.809
	CIReflectCustWants	0.739	0.546			
	VCChangeForValue	0.766	0.587			
	VCCustDriveMktg	0.858	0.736			
IN	INDigitalChangeMktg	0.804	0.646	0.687	0.898	0.849
	INLearnThruFailure	0.866	0.750			
	INMktgWillChange	0.843	0.711			
	INTryImproveService	0.799	0.638			
OC	OFRespondUnpredicted	0.860	0.740	0.676	0.913	0.881
	PRGoExternal	0.795	0.632			
	PRGuideExperience	0.826	0.682			
	PRReviewCompetitors	0.848	0.719			
	PRUptodateIndustry	0.782	0.612			
RI	RIBenefitWillInvest	0.826	0.682	0.684	0.866	0.768
	RIRiskToImprove	0.860	0.740			
	RISpendUncertainty	0.794	0.630			
RL	RLDigitalStaff	0.783	0.613	0.699	0.874	0.784
	RLUseAllData	0.877	0.769			
	RLUseNetwork	0.844	0.712			

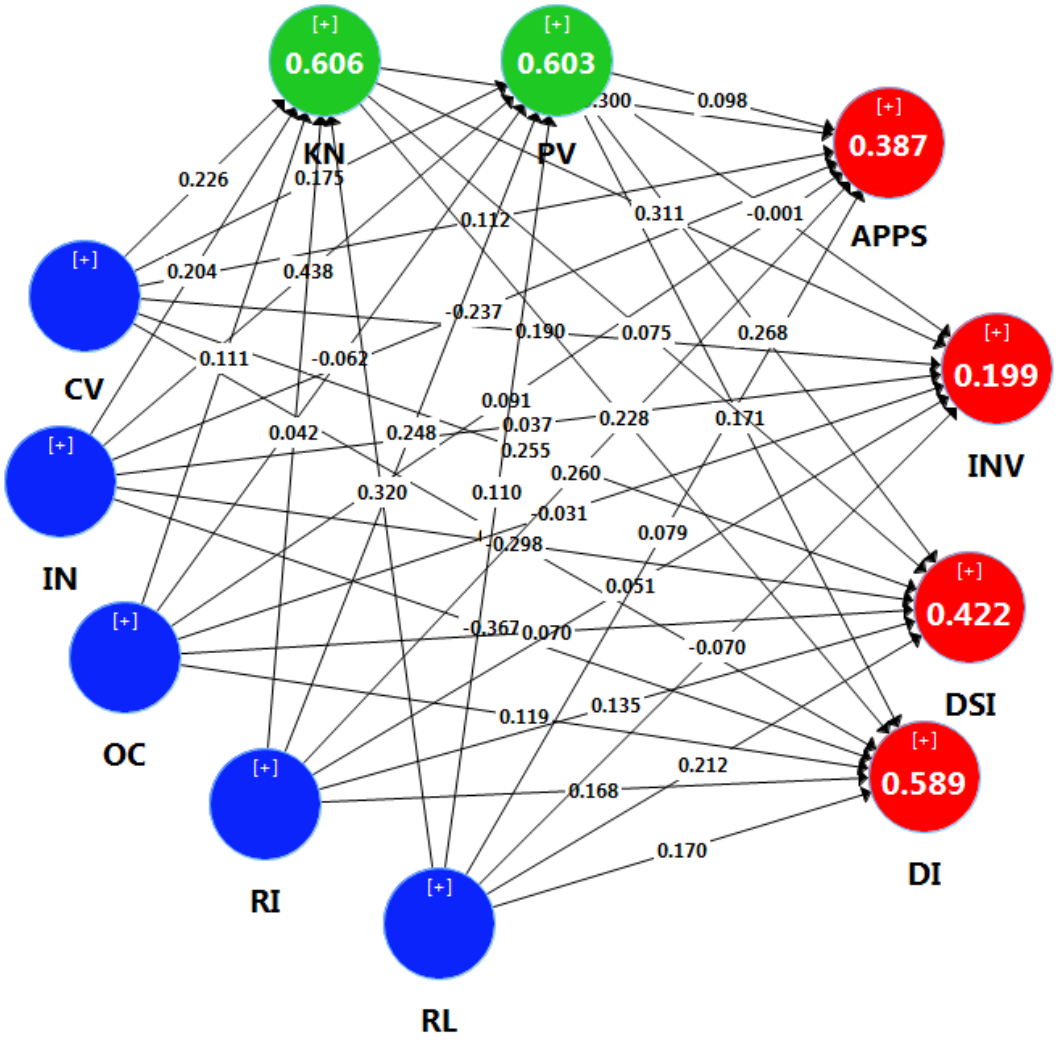
Having accepted the measurement model, the direct and mediating relationships were then analysed in the structural model.

6.8 EMO, ADT and AUDT structural model analysis

Once the convergent and discriminant validity of the measurement model were maximised, the significance of the relationships between the latent variables and relevance of the coefficients were examined. The model shown in Figure 6.8 represents the acceptable measurement model with path coefficient values given for each relationship. Bootstrapping provided standard errors and *p* values to assess significance of the direct and indirect relationships. As with the EMO and AUDT measurement model, the hypothesis tested the significance of the *p* values of each

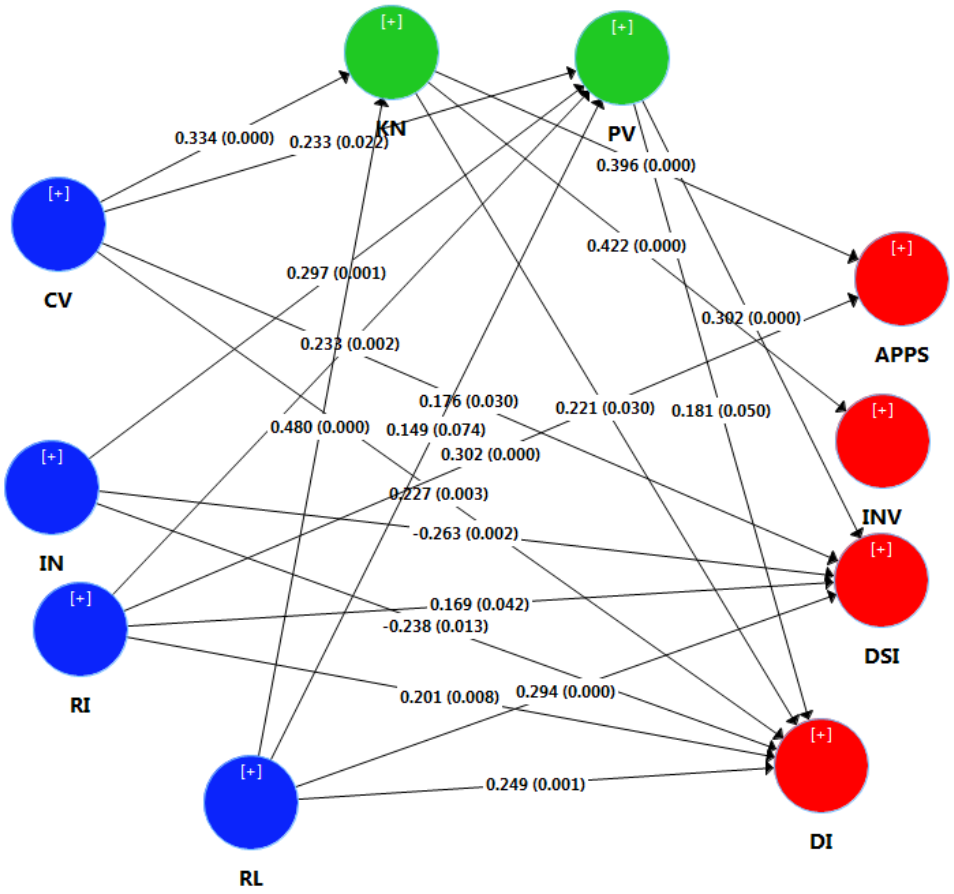
relationship and any that did not meet the widely accepted value of 0.05 was systematically removed starting with the highest values. The bootstrapping process tested 38 relationships and 18 were removed due to their *p* value varying between 0.765 and 0.142 (above the 0.05 threshold). Bootstrapping also once again resulted in the removal of the latent variable Opportunity Creation as it did not have any significant relationships with the ADT and AUDT first order constructs.

Figure 6.8: EMO, ADT and AUDT first order structural model - path coefficients and R^2



The structural model that tests the remaining hypotheses resulted in 20 significant relationships between the first order constructs of EMO, ADT and AUDT. The *p* values of the significant relationships were between less than 0.001 and 0.045 except for CV > DI at 0.080. The significant relationships following a two-tailed test are shown in Figure 6.9.

Figure 6.9: EMO, ADT and AUDT first order model - path coefficients and *p* values



Comparing the significant relationships of the direct and mediated model two elements are evident. Firstly, the merged Opportunity Creation construct is removed again - from both the EMO and AUDT first order direct relationship model and the model with ADT first order constructs as mediators. Secondly, all the significant direct relationships from Figure 6.7 (p.170) remain and there are significant mediated relationships that are introduced back into the model.

Once again, the structural model is assessed to establish whether there are any collinearity issues within the predictor constructs and to evaluate the size of any effect. The specific relationships of the predictor constructs that were assessed for collinearity from Figure 6.9 are as follows: -

1. Customer Value and Resource Leveraging on Knowledge
2. Customer Value, Innovation Focus, Risk Management and Resource Leveraging on Perceived Value
3. Knowledge and Risk Management on Digital Marketing Applications

4. Customer Value, Innovation Focus, Risk Management, Resource Leveraging and Perceived Value on Customer Data Storage and Integration
5. Customer Value, Innovation Focus, Risk Management, Resource Leveraging, Knowledge and Perceived Value on Data Insight

KN is the only predictor construct of INV therefore there is no collinearity to be assessed. Table 6.16 shows the values of the VIFs of the constructs within the inner model to ensure that there is no collinearity between the constructs.

Table 6.16: AUDT, ADT and EMO first order inner model variance inflation factors

		AUDT				ADT	
		APPS	**DI**	**DSI**	**INV**	**KN**	**PV**
EMO	**CV**		2.374	2.293		1.736	2.169
	IN		1.957	1.957			1.755
	RI	1.313	1.859	1.858			1.733
	RL		2.298	1.905		1.736	1.854
ADT	**KN**	1.313	2.650		1.000		
	PV		2.644	2.288			

All VIF values are clearly below the threshold of 5 (Hair et al. 2017) so collinearity among the predictor variables is not critical within the mediated structural model and it is now possible to assess the effect or importance of the relationships and the model's predictive power.

The same procedures used to evaluate the direct relationships between EMO and AUDT are used in the structural model to estimate the indirect and direct relationships. The processes are evaluating the path coefficients and coefficients of determination (R^2 values); assessing the path coefficients; understanding the f^2 and q^2 effect size; and a new process to assess the predictive relevance of the path model (Q^2 values) using the blindfolding procedure (Hair et al. 2017).

6.8.1 Structural path coefficients

The path coefficients of the structural model were calculated using the PLS-SEM algorithm again (Table 6.17).

Table 6.17: AUDT and ADT first order path coefficients

		AUDT				ADT	
		APPS	**INV**	**DSI**	**DI**	**KN**	**PV**
EMO	**CV**			0.176	0.227	**0.334**	0.233
	IN			-0.263	-0.238		0.297
	RI	**0.302**		0.169	0.201		0.233
	RL			0.294	0.249	**0.480**	0.149
ADT	**KN**	**0.396**	**0.422**		0.221		
	PV			**0.302**	0.181		

Once again, there are no particularly strong associations as the path coefficients are all below 0.5. The path coefficients demonstrate the strength of the associations between the exogenous (EMO and ADT) and endogenous (AUDT) first order constructs. The strongest associations are between RL and KN (0.480), KN and INV (0.422) and KN and APPS (0.396). CV and KN have a less strong association (0.334). The weakest associations are between RL and PV (0.149), RI and DSI (0.169) and CV and DSI (0.176).

An examination of the total effects of the strength of influence of the four constructs (CV, IN, RI and RL) on the target variables (APPS, INV, DSI and DI) via the mediating construct (KN and PV) provides further insight – Table 6.18. The total effect is the sum of the direct and indirect effects and is of interest here as the differential impact of EMO constructs on the AUDT constructs is being explored via the mediating constructs of ADT.

Table 6.18: Total effects – AUDT new first order effect sizes highlighted

		AUDT				ADT	
		APPS	**INV**	**DSI**	**DI**	**KN**	**PV**
EMO	**CV**	0.132	0.141	0.246	0.343	**0.334**	0.233
	IN			-0.173	-0.184		0.297
	RI	**0.302**		0.239	0.243		0.233
	RL	0.190	0.202	0.339	0.382	**0.480**	0.149
ADT	**KN**	**0.396**	**0.422**		0.221		
	PV			**0.302**	0.181		

When comparing the first order path coefficients in Table 6.17 with the values of the total effects, the mediator path coefficient values do not change. CV and RL are now shown to have some effect on APPS and INV, albeit not particularly

strong, and the mediators strengthen all the remaining EMO and AUDT construct relationships – an indication of their relevance as mediators in explaining the constructs of AUDT.

6.8.2 Coefficient of determination - R^2

The coefficient of determination is a measure of the extent to which the variance in an endogenous construct is explained by its predictor constructs (Hair et al. 2017). The coefficient of determination and the combined effects of the exogenous constructs (EMO and ADT) on the endogenous construct (ADT and AUDT) - represent the predictive power of the structural model. The R^2 value ranges from 0 to 1 with higher levels demonstrating greater predictive accuracy (Table 6.19).

Table 6.19: AUDT and ADT first order construct R^2 values

		R^2
AUDT	APPS	0.364 moderately weak
	DI	0.565 moderate
	DSI	0.400 moderately weak
	INV	0.178 weak
ADT	KN	0.550 moderate
	PV	0.563 moderate

None of the first order constructs are substantial (0.75) when it comes to the variance of the effect of the predictive accuracy, but only INV is weak with APPS and DSI as better than weak but not considered moderate. DI, KN and PV are above the 0.5 rule of thumb (Hair et al. 2017) and are considered moderate.

6.8.3 The effect size - f^2

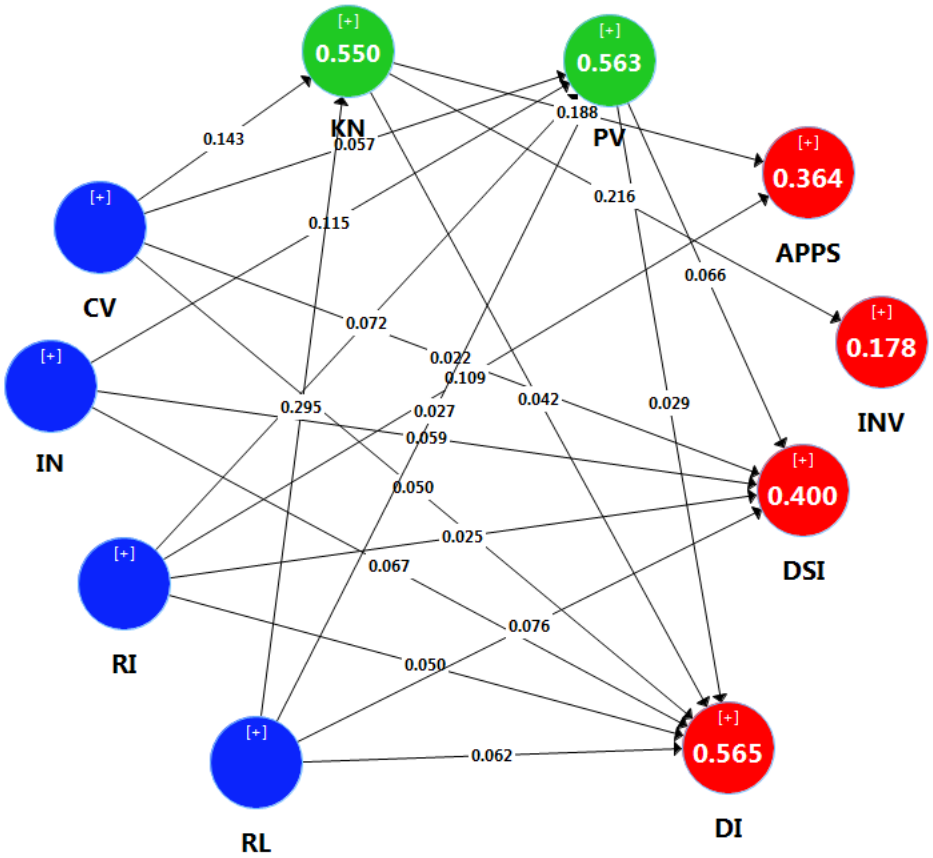
The effect size f^2 indicates the relevance of an exogenous construct in explaining the association with the endogenous construct. Cohen's (1988) guidelines provide the values that represent small (0.02), medium (0.15) and large effects (0.35). Any values less than 0.02 indicate that there is no effect. The values for the structural model are in Table 6.20 and Figure 6.10.

Table 6.20: The effect size f^2 values of EMO and ADT on AUDT first order constructs

		AUDT				ADT	
		APPS	DI	DSI	INV	KN	PV
EMO	CV		0.050	0.022		**0.143**	0.057
	IN		0.067	0.059			**0.115**
	RI	**0.109**	0.050	0.025			0.072
	RL		0.062	0.076		**0.295**	0.027
ADT	KN	0.188	0.042		0.216		
	PV		0.029	0.066			

All of the exogenous (predictor) constructs have an effect on the endogenous constructs albeit most of them very small. The DI, DSI and PV constructs are only affected to a small extent by the EMO constructs whereas RL and CV have the most relevance when explaining KN. KN in turn, has a greater relevance when considering its relationship to APPS and INV and finally the strongest effect size is between RL and KN (0.295).

Figure 6.10: EMO, ADT and AUDT first order model f^2 and R^2



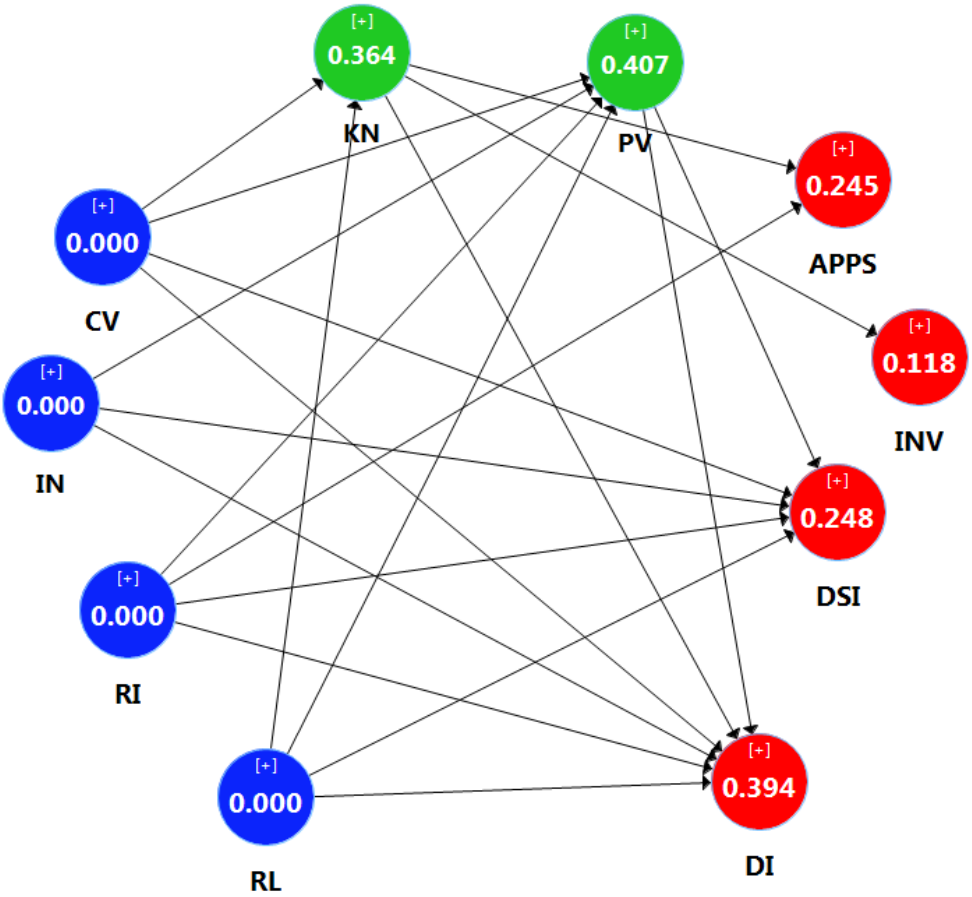
6.8.4 Structural model's predictive power - Q^2

The predictive relevance of the structural model can also be evaluated using the Q^2 value (Geisser 1974; Stone 1974). Predictive relevance of a model means that the model can accurately predict data that is not used in the model estimation. When the Q^2 values are larger than zero for an endogenous latent variable, this indicates the path model's predictive relevance for a particular dependent construct. Q^2 values are obtained by the blindfolding procedure described by Hair et al. (2017) as: -

> *"a sample reuse technique that omits part of the data matrix and uses the model estimates to predict the omitted part. It indicates a model's out-of-sample predictive power." (Hair et al. 2017, p.132)*

In PLS-SEM the Q^2 value for endogenous constructs is calculated using cross-validated redundancy by using the path model estimates of both the structural model and the measurement model of data prediction (Hair et al. 2017). The Q^2 values are shown in Figure 6.11.

Figure 6.11: Predictive power (Q^2) of the first order constructs EMO and ADT on AUDT



The Q^2 values represent the model's predictive relevance with regard to all of the endogenous constructs and they are all above zero – PV (0.407) DI (0.394) and KN (0.364) have the highest Q^2 values. The weakest value is INV at 0.118. These results support the model's predictive relevance regarding the endogenous latent variables with INV being the least predictable.

6.8.5 The effect size - q^2

The q^2 is a measure to assess the contribution of an exogenous construct to an endogenous construct's Q^2 value and can be used to evaluate the model's predictive power. Values of 0.02, 0.15 and 0.35 indicate that an exogenous construct has a small, medium or large predictive relevance for a specified endogenous construct. The q^2 effect size is calculated manually by using the included and excluded Q^2 values of an exogenous predictor construct. The Q^2 values are given in Table 6.21 and the calculated q^2 in Table 6.22.

Table 6.21: Q^2 values for predictive relevance

		Q^2
AUDT	APPS	0.245
	INV	0.118
	DSI	0.248
	DI	0.394
ADT	KN	0.364
	PV	0.407

Table 6.22: The effect size q^2 values of ADT and AUDT first order constructs

		AUDT			ADT	
		APPS	DSI	DI	KN	PV
EMO	CV		0.011	0.025	0.068	0.027
	IN		0.029	0.033		0.059
	RI	0.062	0.012	0.023		0.037
	RL		0.035	0.028	**0.137**	0.010
ADT	KN	**0.102**		0.017		
	PV		0.032	0.012		

The constructs with medium predictive relevance are: -

- Knowledge on Digital Applications (0.102)

- Resource Leveraging on Knowledge (0.137)

The constructs with small or very small predictive relevance are: -

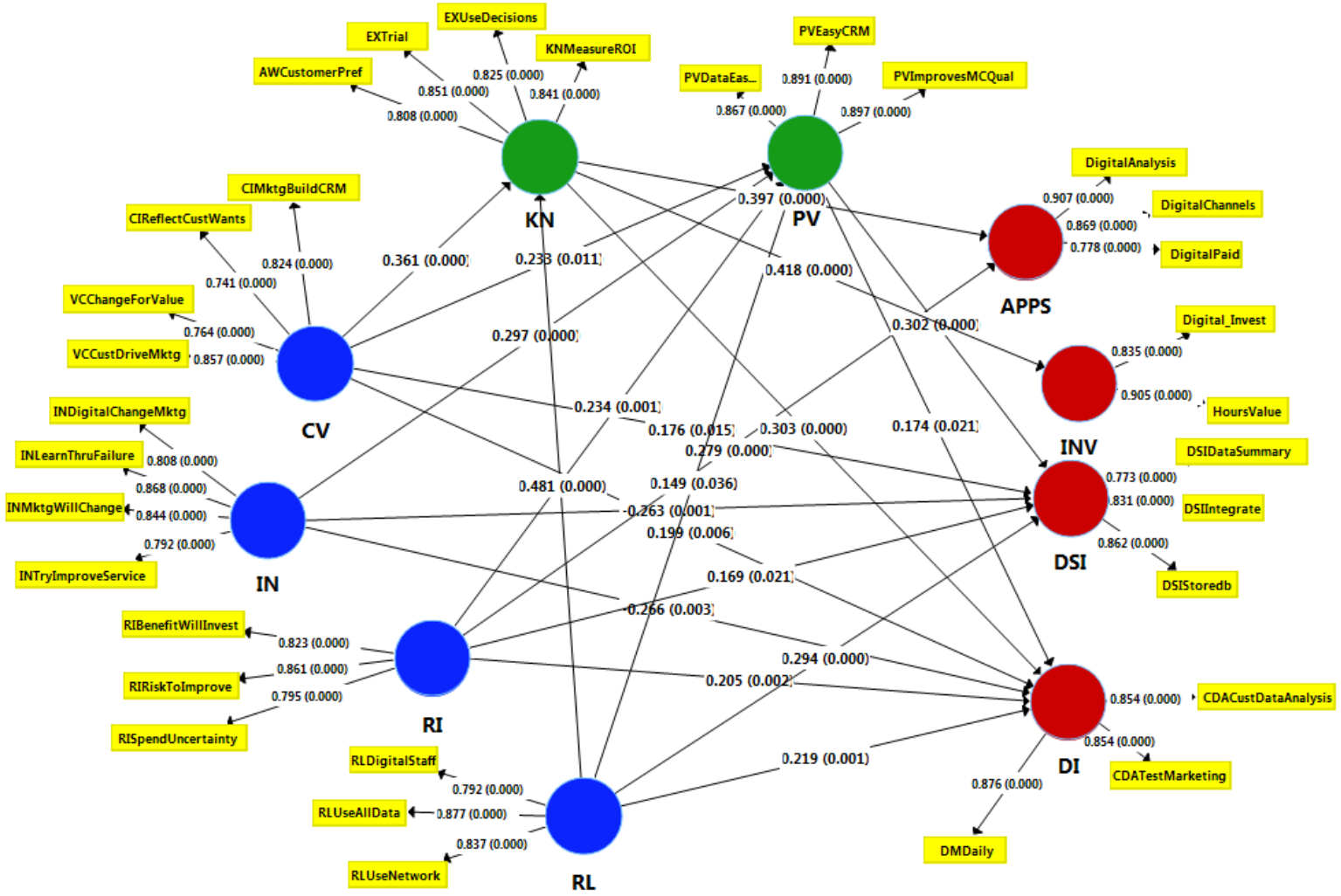
- Customer Value on Knowledge and Perceived Value, and Customer Data Storage and Integration and Data Insight
- Innovation Focus on Perceived Value, Customer Data Storage and Integration and Data Insight
- Risk Management on Perceived Value, Digital Applications, Customer Data Storage and Integration and Data Insight
- Resource Leveraging on Perceived Value, Customer Data Storage and Integration and Data Insight
- Knowledge on Data Insight
- Perceived Value on Customer Data Storage and Integration and Data Insight

6.8.6 Mediation analysis findings

Full mediation occurs when the direct effect is not significant, and the mediated effect is significant and partial mediation occurs when a mediating variable partially explains the relationship between an exogenous and endogenous variable, but a significant direct relationship remains.

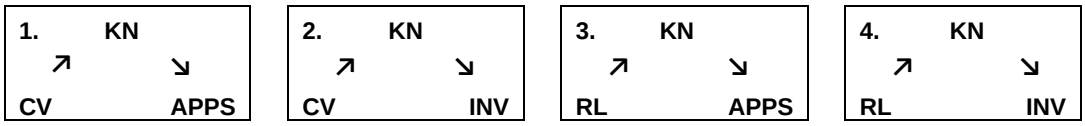
Full mediation, partial mediation and no mediation were found within the significant relationships between the constructs. Knowledge was found to be a partial and full mediator and Perceived Value was found to be a partial mediator only. The relationships between the Customer Value construct and Applications and Investment constructs are fully mediated by Knowledge of digital marketing technology. The relationships between the Resource Leveraging construct, and Applications and Investment constructs are fully mediated by Knowledge of digital marketing technology. In other words, knowledge of digital marketing technology fully explains the influence of customer value and resource leveraging on the adoption and use of digital marketing applications and investment. The effects of Knowledge and Perceived Value as mediating constructs are shown in Figure 6.12.

Figure 6.12: EMO, ADT and AUDT model - outer weights, *p* values and path coefficients



The relationships that are fully mediated by knowledge are given in Table 6.23.

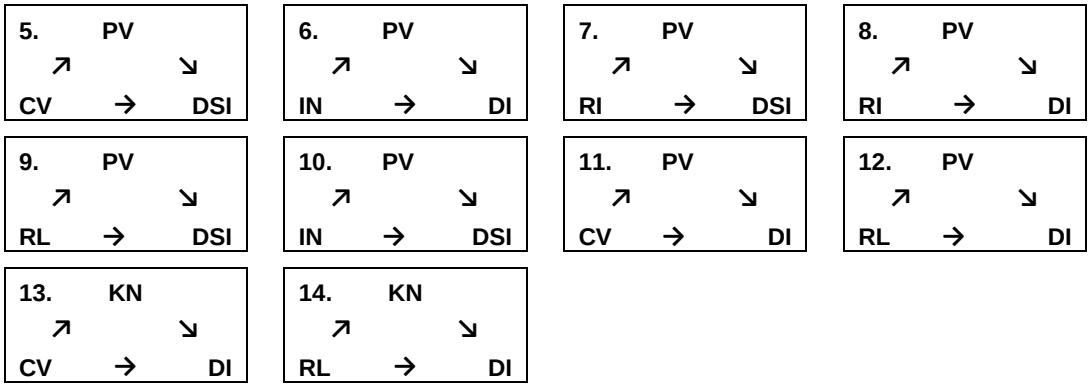
Table 6.23: Constructs with knowledge as a full mediator



In the fully mediated relationships given above, the significant direct relationships between CV and APPS and CV and INV are removed as they do not meet the threshold of 0.05. The relationships identified as non-significant between RL and APPS and RL and INV from Figure 6.7 are brought back into the model as they become fully mediated by KN. Partial mediation is in evidence when the mediating variable partially explains the relationships between an endogenous and an exogenous construct, and the direct effect between these constructs remains significant.

The partially mediated relationships are shown in Table 6.24, in other words they partially explain the causal relationship.

Table 6.24: Constructs with knowledge and perceived value as partial mediators



The significance of the direct relationships in the partially mediated models numbered 5 to 9 are retained and in number 10, one relationship is introduced back into the structural model as PV partially mediates the significant relationship between IN and DSI.

The next finding to note is that both KN and PV partially mediate the significant relationships between CV and DI and RL and DI. Finally, the remaining significant

direct relationship from Figure 6.7 of RI and APPS is neither fully or partially mediated by KN or PV.

The mediated relationships can be expressed in terms of the fourth amended hypothesis: -

> Hypothesis 4: the relationship between an EMO and AUDT in STBs is mediated by the owner-manager's attitude towards digital marketing technology at both a first and second order construct level.

> Amended hypothesis 4: the relationship between the characteristics of an EMO (customer value, innovation focus, resource leveraging, risk management) and the components of the adoption and use of digital marketing technology (digital marketing applications, digital marketing investment, customer data storage and integration, data insight) is fully or partially mediated or explained by the knowledge and perceived value of digital marketing technology by the STB owner-manager.

Knowledge fully mediates the following relationships: -

> Customer Value → Digital Applications
> Customer Value → Digital Investment
> Resource Leveraging → Digital Applications
> Resource Leveraging → Digital Investment

Perceived Value partially mediates the following relationships: -

> Customer Value → Customer Data Storage and Integration
> Innovation Focus → Customer Data Storage and Integration
> Innovation Focus → Data Insight
> Risk Management → Customer Data Storage and Integration
> Risk Management → Data Insight
> Resource Leveraging → Customer Data Storage and Integration

Both KN and PV partially mediate Customer Value → Data Insight and Resource Leveraging → Data Insight

Knowledge has no mediating effect on these relationships: -

Customer Value → Customer Data Storage and Integration
Innovation Focus → Data Insight
Risk Management → Digital Applications
Risk Management → Customer Data Storage and Integration
Risk Management → Data Insight
Resource Leveraging → Customer Data Storage and Integration

Perceived Value has no mediating effect on these relationships: -

Customer Value → Digital Applications
Customer Value → Digital Investment
Risk Management → Digital Applications

6.9 EMO, ADT and AUDT analysis model results summary

The evaluation of the measurement model included the merged constructs from the EMO and AUDT first order model (CV, OC and DI), and AW and EX were merged into KN resulting in a slightly simplified model with 11 first order constructs. Following the measurement model analysis, there were 38 direct and 40 indirect first order relationships estimated and bootstrapping resulted in 20 significant relationships. The path coefficients of the direct relationships of the first order constructs of EMO, ADT and AUDT are summarised in Table 6.25 along with their significance or non-significance. The non-significant relationships are combined at the bottom of the table.

Table 6.25: EMO, ADT and AUDT first order construct significant direct relationships

Exogenous construct		Endogenous construct	Significant?	Path Coefficient
RL	→	KN	**Yes**	**0.480**
KN	→	INV	**Yes**	**0.422**
KN	→	APPS	**Yes**	**0.396**
CV	→	KN	**Yes**	**0.334**
RI	→	APPS *	**Yes**	**0.302**
PV	→	DSI	**Yes**	**0.302**
IN	→	PV	**Yes**	0.297
RL	→	DSI *	**Yes**	0.294
RL	→	DI *	**Yes**	0.249
CV	→	PV	**Yes**	0.233
RI	→	PV	**Yes**	0.233
CV	→	DI *	**Yes**	0.227
KN	→	DI	**Yes**	0.221
RI	→	DI *	**Yes**	0.201
PV	→	DI	**Yes**	0.181
CV	→	DSI *	**Yes**	0.176
RI	→	DSI *	**Yes**	0.169
RL	→	PV	**Yes**	0.149
IN	→	DI *	**Yes**	-0.238
IN	→	DSI	**Yes**	-0.263
CV	→	APPS, INV	No	
IN	→	KN, INV, APPS	No	
OC	→	KN, PV, APPS, INV, DSI, DI	No	
RI	→	KN, INV	No	
RL	→	APPS, INV	No	
KN	→	DSI	No	
PV	→	APPS, INV	No	

* Retained significant relationships from Model 1

Eight of the ten significant direct relationships from the EMO – AUDT first order construct model are retained in this model (as shown by *). The two exceptions are CV → APPS and CV → INV that become insignificant. IN → DSI conversely becomes significant and was insignificant in the EMO – AUDT first order model. These relationship changes confirm that mediation has some effect, analysed in the previous section (6.8.6). All of the path coefficients are still below 0.5 with RL having the strongest associations with KN followed by KN → INV and → APPS. The weakest associations are between CV → RI and → DSI, and RL → PV have the weakest association. IN → DI, and IN → DSI have a weak negative association (Table 6.26).

Table 6.26: Effect sizes of significant relationships

Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
RL	→	KN	**0.480**	0.295	Medium	0.550	Moderate
KN	→	INV	**0.422**	0.216	Medium	0.178	Weak
KN	→	APPS	**0.396**	0.188	Medium	0.364	Moderate/weak
CV	→	KN	**0.334**	0.143	Medium	0.550	Moderate
RI	→	APPS	**0.302**	0.109	Small	0.364	Moderate/weak
PV	→	DSI	**0.302**	0.066	Small	0.400	Moderate/weak
IN	→	PV	0.297	0.115	Small	0.563	Moderate
RL	→	DSI	0.294	0.076	Small	0.400	Moderate/weak
RL	→	DI	0.249	0.062	Small	0.565	Moderate
CV	→	PV	0.233	0.057	Small	0.563	Moderate
RI	→	PV	0.233	0.072	Small	0.563	Moderate
CV	→	DI	0.227	0.050	Small	0.565	Moderate
KN	→	DI	0.221	0.042	Small	0.565	Moderate
RI	→	DI	0.201	0.050	Small	0.565	Moderate
PV	→	DI	0.181	0.029	Small	0.565	Moderate
CV	→	DSI	0.176	0.022	Small	0.400	Moderate/weak
RI	→	DSI	0.169	0.025	Small	0.400	Moderate/weak
RL	→	PV	0.149	0.027	Small	0.563	Moderate
IN	→	DI	-0.238	0.067	Small	0.565	Moderate
IN	→	DSI	-0.263	0.059	Small	0.400	Moderate/weak

The results may now be considered in terms of the four research questions and hypotheses.

Hypothesis 1: The characteristics of an EMO - (a) customer intensity, (b) innovation focus, (c) proactivity, (d) opportunity focus, (e) resource leveraging, (f) risk management and (g) value creation, have a direct and positive influence on the components of AUDT - (i) the number of digital marketing applications adopted and used; (ii) investment in digital marketing technology; (iii) customer data storage and integration; (iv) customer data analysis; and (v) marketing decision making in STBs.

Hypothesis 2: the characteristics of an EMO - (a) value creation, (b) customer intensity, (c) opportunity focus, (d) innovation focus, (e) proactivity, (f) resource leveraging, and (g) risk management - have a direct and positive influence on the elements of the STB owner-manager's attitude towards digital marketing technology, namely

(a) awareness, (b) knowledge, (c) experience, and (d) perceived value of digital marketing technology.

Hypothesis 3: the elements of the STBs owner-manager's attitude towards digital marketing technology, namely (a) awareness, (b) knowledge, (c) experience, and (d) perceived value have a direct and positive effect on the components of the adoption and use of digital marketing technology (the number of digital marketing applications adopted and used; investment in digital marketing technology; customer data storage and integration; customer data analysis; and marketing decision making) in STBs.

Hypothesis 4: the relationship between an EMO and AUDT in STBs is mediated by the owner-manager's attitude towards digital marketing technology at both a first and second order construct level.

Restating the results in terms of the hypotheses 1 and 2 for the EMO first order constructs and their respective relationships with ADT and AUDT is as follows: -

- The relationship between a Customer Value orientation and Knowledge and Perceived Value is significant. There is a medium effect for explaining the relevance of Customer Value to Knowledge and a small effect for Perceived Value. There is a moderate impact on the variation of Knowledge and Perceived Value as the importance of Customer Value increases. Customer Value has a small effect when explaining Customer Data Storage and Integration, and Data Insight and a moderate impact on the variance in Data Insight and less of an impact on changes in Customer Data Storage and Integration.
- The relationship between Innovation Focus and Perceived Value is significant with a small effect on its relevance to Perceived Value and moderate variation. Innovation Focus has a negative association to Customer Data Storage and Integration, and Data Insight with a slight relevance when explaining both constructs. Innovation Focus produces a moderate variation on Data Insight and a weaker variance in Customer Data Storage and Integration.

- The relationships between Risk Management and Perceived Value and Data Insight is significant with a small effect on its relevance to both constructs. Risk has a moderate variance effect on Perceived Value and Data Insight. Risk also has a small effect on its relevance to Applications and Customer Data Storage and Integration and a weaker variance effect on both constructs.
- The relationship between Resource Leveraging and Knowledge and Perceived Value is significant. There is a medium effect for explaining the relevance of Resource Leveraging to Knowledge and a small effect for Perceived Value. There is a moderate impact on the variation of Knowledge and Perceived Value as the importance of Resource Leveraging increases. Resource Leveraging has a small effect when explaining Customer Data Storage and Integration, and Data Insight and a moderate impact on the variance in Data Insight and less of an impact on changes in Customer Data Storage and Integration.

The results for the first order constructs of ADT and their relationship to AUDT constructs for hypothesis 3 are as follows: -

- The relationship between Knowledge and Applications, Investment and Data Insight is significant. There is a medium effect for explaining the relevance of Knowledge to Applications and Investment and a small effect for Data Insight. There is a moderate impact on the variation of Knowledge and Data Insight, with less of an impact on Applications and only a weak variation in Investment.
- The relationship between Perceived Value and Customer Data Storage and Integration, and Data Insight is significant. There is a small effect for explaining the relevance of Perceived Value to both exogenous constructs and a moderate variation on Data Insight with a relatively weak variation to Customer Data Storage and Integration.

Finally, the model's ability to predict Perceived Value, Data Insight and Knowledge is highest, and weakest for Investment. Moreover, the model's ability to predict the relevance of Knowledge on Applications and Resource Leveraging on Knowledge is highest, with only small or very small relevance on all the other remaining relationships.

With regard to Hypothesis 4 at the first order level, Knowledge acts as both a partial and full mediator and Perceived Value was found to be a partial mediator. Knowledge fully mediates the relationships between Customer Value and Applications and Customer Value and Investment and confirms the significance of Knowledge when explaining the fully mediated relationships between Resource Leveraging and Applications, and Resource Leveraging and Investment.

Perceived Value does not have any mediating effect on the significance between Customer Value and Applications, Customer Value and Investment, and Risk Management and Applications. Perceived Value partially mediates all the relationships between Customer Value, Innovation Focus, Risk Management and Resource Leveraging on both Customer Data Storage and Integration, and Data Insight. The Innovation Focus and Customer Data Storage and Integration relationship becomes significant when partially mediated by Perceived Value.

6.10 EMO, ADT and AUDT second order structural model evaluation

Having established the direct relationships between EMO and AUDT and the indirect relationships mediated by ADT at the first order level, it is now possible to compute the scores of the first order constructs (running the PLS algorithm) and use them as indicators to estimate the relationships between all three second order constructs. The measurement items are now expressed as formative indicators in the measurement model because they represent the constructs that make up EMO, ADT and AUDT. There are three ways to evaluate formative measurement models by assessing convergent validity; collinearity issues and the significance and relevance of the formative indicators.

6.10.1 Convergent validity

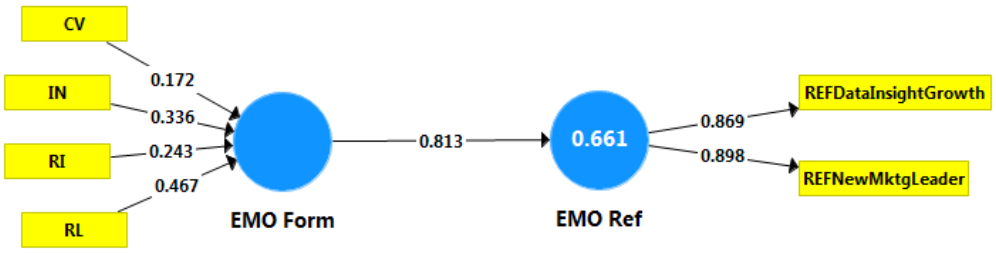
Convergent validity of formative indicators in measurement models is assessed by redundancy analysis (Chin 1998). Redundancy analysis is done by comparing formative indicators of EMO with reflective indicators of EMO, in other words, its correlation with an alternative measure of the construct. Here, two reflective

summary statements for EMO (see also Table 6.1, p.158) were used to facilitate the redundancy analysis for EMO.

1. REFDataInsightGrowth - I use customer data to gain insight to create customer value and opportunities for growth
2. REFNewMktgLeader - Trying brand new marketing ideas before my competitors helps me to learn even if they do not work out

The path coefficient linking two constructs indicates the validity of the indicators for the construct. Hair et al. (2017) recommend path coefficients values are greater than 0.8 and R^2 values (coefficient of determination) are greater than 0.64 for formative models. The R^2 value (between 0 and 1) illustrates the variance in an endogenous construct that is explained by the exogenous construct – the higher the value the greater the predictive accuracy. Figure 6.13 shows the redundancy analysis for convergent validity assessment of the formative indicators of EMO.

Figure 6.13: Redundancy analysis for formative and reflective indicators of EMO



With a path coefficient value of 0.813 that translates into an R^2 value of 0.661, the formative indicators of EMO are acceptable.

6.10.2 Collinearity issues

The first order constructs that are now formative indicators of EMO, ADT and AUDT were created to be independent of each other and consequently, high collinearity is not anticipated. High collinearity has an impact on the estimation of weights and their statistical significance in formatively measured models. Collinearity is assessed using the VIFs and there are no critical levels of

collinearity in the model as the highest VIF is 2.782 – well below the threshold of 5 (Table 6.27) and the more conservative threshold of 3 (Hair et al. 2019).

Table 6.27: EMO, ADT and AUDT outer model variation inflation factors

		Outer VIF
EMO	CV	2.169
	IN	1.755
	RI	1.733
	RL	1.854
ADT	KN	1.875
	PV	1.875
AUDT	APPS	1.859
	INV	1.401
	DSI	2.457
	DI	2.782

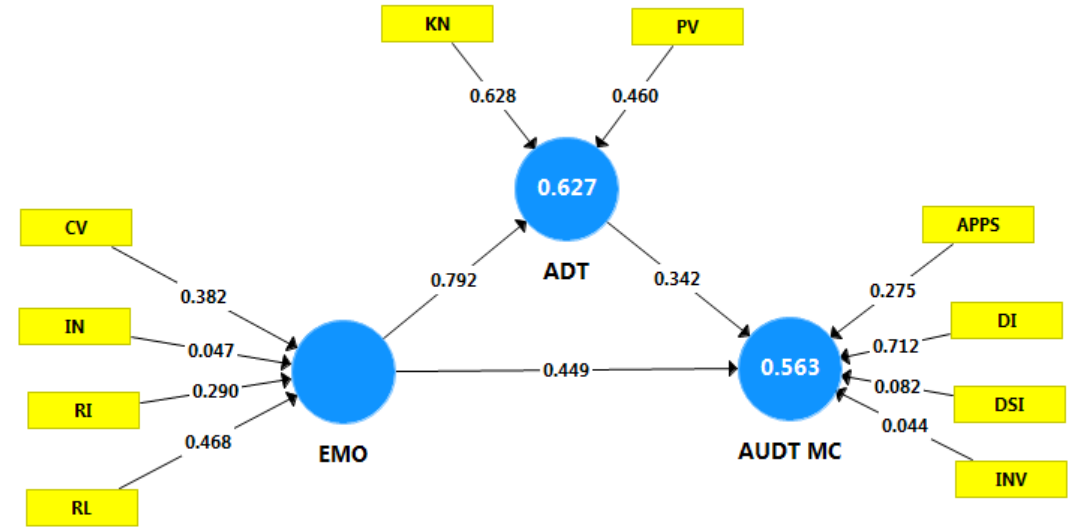
The outer weights represent the contribution of each indicator to the construct and in th simplified second order construct model 3, IN, DSI and INV are the weakest and KN and DI the strongest – see Figure 6.14.

6.10.3 Formative indicators - significance and relevance

The outer weight of each of the formative measurement items is an important indication of their contribution to the construct. If a construct is measured by many formative indicators, there is a likelihood that one or more indicators may have a low or insignificant weight (Hair et al. 2017). Therefore, formative measurement models are limited to the number of indicators that can retain a statistically significant weight – when the indicators are assumed to be uncorrelated, the maximum possible outer weight is $1/\sqrt{n}$ where n is the number of indicators (Hair et al. 2017). Figure 6.14 shows the path coefficients, outer weights and R^2 effect size after running the PLS algorithm.

For an EMO, all the indicators are below 0.5 ($1/\sqrt{4}$), for ADT, KN and PV are both below 0.707 ($1/\sqrt{2}$) and all of the indicators of AUDT are below 0.5 ($1/\sqrt{4}$) with the exception of DI (0.712). DI is not eliminated on the basis of its outer weight alone as further evaluation was done to establish whether or not it should be retained as a formative indicator of AUDT (see section 6.10.4).

Figure 6.14: Formative measurement model - path coefficients, outer weights and R^2

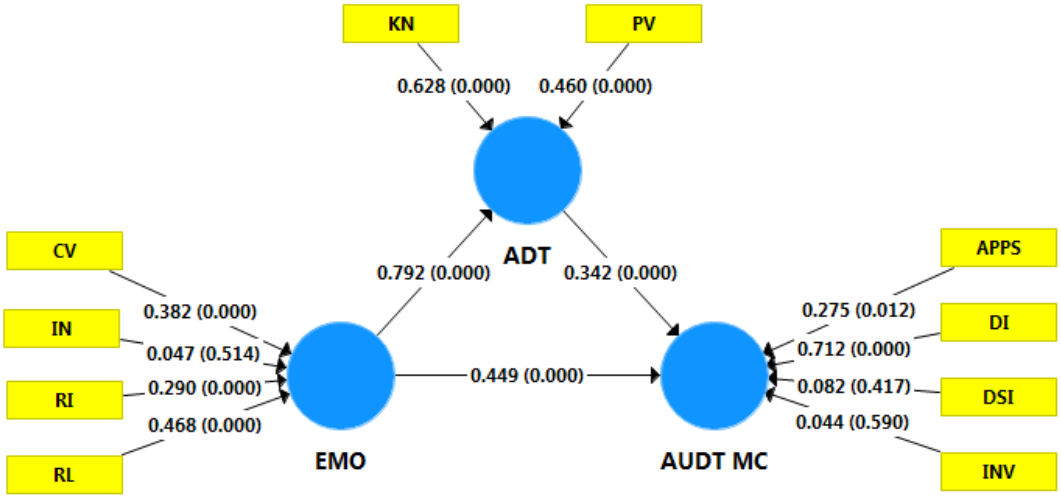


6.10.4 Bootstrapping to assess formative indicator significance

In order to assess the weight of the indicator's contribution to its construct, bootstrapping is used to test if the outer weights are significantly different from zero. A significant indicator weight provides empirical evidence supporting the retention of the indicator (Hair et al. 2017). When an indicator's weight is not significant, but the corresponding loading is greater than 0.5, there is a reasonable case for retaining the indicator. If it is below 0.5, the formative indicator should be considered for removal (Hair et al. 2017).

The bootstrapping method estimates standard errors and significance. After bootstrapping, three relationships were not significant. The decision making process recommended by Hair et al. (2017) was used to retain or remove the three insignificant formative indicators – INV, DSI and IN. The results of the bootstrapping procedure are shown in Figure 6.15. The indicator's absolute contribution to the construct is considered according to its outer weight, and the indicators with a non-significant weight should be eliminated if the weight is also not significant.

Figure 6.15: Formative measurement model path coefficients, outer weights and *p* values



The results for the formatively measured constructs of EMO, ADT and AUDT are given in Table 6.28.

Table 6.28: Formative construct outer weights significance testing results

Formative Construct	Formative Indicator	Outer Weights (Outer Loading)	VIF	*p* value	95% Confidence interval	Significance ($p < 0.05$)?
AUDT	APPS	0.275 (0.795)	1.859	0.012	[0.071, 0.502]	yes
	INV	0.044 (0.561)	1.401	0.592	[-0.113, 0.217]	no
	DI	0.712 (0.970)	2.457	0.000	[0.491, 0.905]	yes
	DSI	0.082 (0.802)	2.782	0.407	[-0.125, 0.269]	no
ADT	KN	0.628 (0.942)	1.875	0.000	[0.482, 0.766]	yes
	PV	0.460 (0.889)	1.875	0.000	[0.297, 0.602]	yes
EMO	CV	0.382 (0.881)	2.169	0.000	[0.214, 0.556]	yes
	IN	0.047 (0.670)	1.755	0.515	[-0.096, 0.191]	no
	RI	0.290 (0.759)	1.733	0.000	[0.125, 0.444]	yes
	RL	0.468 (0.879)	1.854	0.000	[0.280, 0.623]	yes

Table 6.28 shows the original outer weights, *p* values and the bootstrap confidence intervals. The bootstrap confidence intervals provide additional results on the stability of the path coefficient estimates. The bootstrap confidence intervals are the predefined probability of error and the standard error of the estimation for the data set and are derived from the percentile method (2.5% for 95% bootstrap confidence interval).

The outer loading for the IN, INV and DSI indicators is greater than 0.5 so these formative indicators are retained despite the non-significance. DI has an acceptable VIF value and is significant, so this indicator is also retained in the model. From a measurement perspective, this model and its formative indicators is accepted.

6.10.5 The effect size of EMO and ADT on AUDT

Once again, this simplified model needs to be evaluated on the basis of the effects of the exogenous constructs EMO and ADT on AUDT. The same evaluation is repeated through the assessment of the path coefficients; evaluation of the coefficients of determination (R^2 values) and understanding the f^2 effect size. According to Hair et al. (2017), PLS-SEM aims to maximise the R^2 values of the endogenous construct (in this case AUDT) and, in general, a value of 0.75 is considered substantial, 0.5 moderate, and 0.25 weak.

The assessment of the contribution of the exogenous construct on the endogenous constructs R^2 value is illustrated by the f^2 effect size. Exogenous construct f^2 values of 0.02, 0.15 and 0.35 indicate a small, medium or large effect respectively on the endogenous construct. EMO has the strongest positive relationship with ADT when examining the path coefficients and calculating the indirect and total effects, (Table 6.29) and both these effect sizes are shown in Figure 6.16.

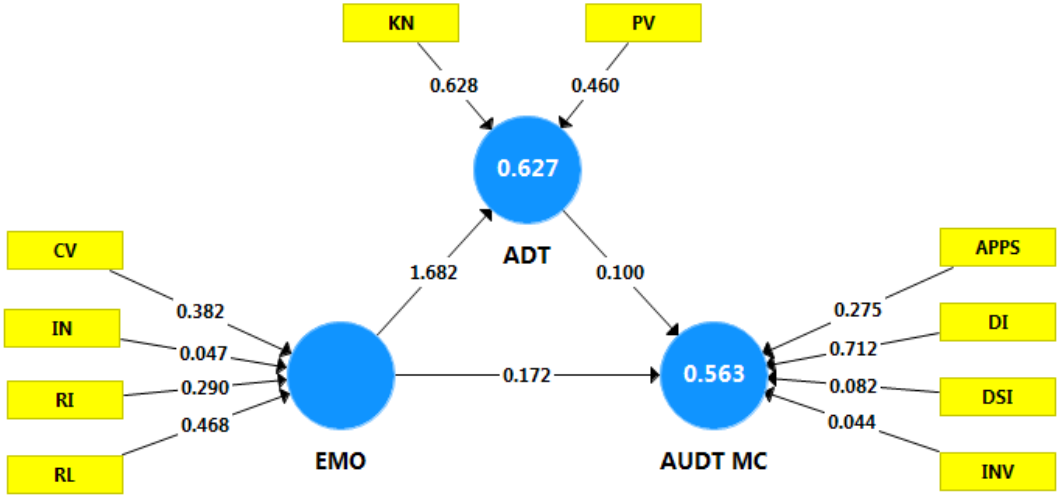
Table 6.29: Path coefficients and total effects (using the PLS algorithm)

	AUDT	ADT
ADT	0.342	
EMO	0.449	0.792

	AUDT	ADT
ADT	0.342	
EMO	0.720	0.792

There is a stronger positive relationship with AUDT when EMO is mediated with ADT (the total effect) – the value increases from 0.449 to 0.720.

Figure 6.16: EMO ADT and AUDT model outer weights, f^2 effect size, and R^2 values



The relationships between EMO and ADT, ADT and AUDT and EMO and AUDT are all significant (see Figure 6.16 and subsequent text). There is a large effect for explaining the relevance of EMO to ADT and ADT to AUDT and a medium effect for explaining EMO to AUDT. There is a moderate impact on the variation of ADT and AUDT when EMO increases (Table 6.30).

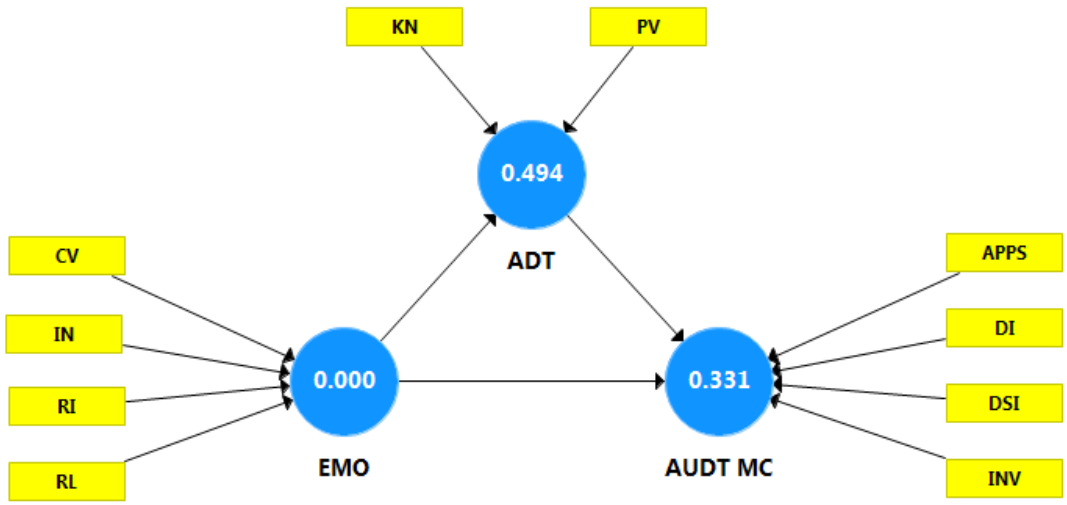
Table 6.30: f^2 and R^2 effect sizes

Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
EMO	→	ADT	0.792	1.682	Large	0.627	Moderate
EMO	→	AUDT	0.449	0.172	Medium	0.563	Moderate
ADT	→	AUDT	0.342	1.000	Large	0.563	Moderate

6.10.6 The predictive path model

The predictive relevance of the second order model is again evaluated using the Q^2 value (Geisser 1974; Stone 1974) calculated with cross-validated redundancy, and the measurement and structural path model estimates using the blindfolding procedure (described in section 6.8.4). The results are shown in Figure 6.17.

Figure 6.17: ADT and AUDT Q^2 value (blindfolding)



Both endogenous constructs are considerably above zero providing clear support that the model's predictive relevance for an EMO on ADT and the AUDT. The q^2 effect size is a measure used to assess the contribution of an exogenous construct to an endogenous construct's Q^2 value and can be used to evaluate the models'

predictive power. Values of 0.02, 0.15 and 0.35 indicate that an exogenous construct has a small, medium or large predictive relevance for a specified endogenous construct (Hair et al. 2017). Using the formula from Hair et al. (2017, p.207) the q^2 effect sizes are expressed as follows: -

EMO predicting AUDT

$$q^2 = \frac{Q^2 \text{ included} - Q^2 \text{ excluded}}{1 - Q^2 \text{ included}} \qquad q^2 = \frac{(0.331 - 0.310)}{1-0.331} \qquad q^2 = \frac{0.021}{0.669} = 0.03$$

The EMO model has a small predictive relevance for AUDT.

6.11 Summary

In order to estimate the relationships between an EMO, ADT and the AUDT, it was necessary to reconstruct the conceptual model at its lowest level to build the measurement and structural models between the constructs. This was done in stages. Firstly, the first order constructs were assessed for reliability and validity as representations of the second order constructs in accordance with the requirements for PLS-SEM. Secondly, the direct relationships between the elements of an EMO and the AUDT were considered in terms of significance and effect size. Thirdly, the mediating constructs that represent ADT were introduced to the model (after they have been assessed as valid and reliable) and once again, significance and effect size was measured. Finally, composite scores were extracted for all the first order constructs so they could be used as formative indicators to analyse the relationships between EMO, ADT and AUDT at the second order level.

Summarising the EMO – AUDT model, statistically, STB owner-managers positively associate customer value with the adoption and use of digital marketing technology, particularly data insight and digital marketing technology investment, but there is less of a positive association with digital marketing applications and customer data storage and integration. An innovation focus does not have a positive relationship with any of the elements associated with AUDT and paradoxically, it even has a negative association with data insight. The effect of risk management on digital marketing applications, customer data storage and

integration and insight is positive but weak and there is no association with digital marketing investment. Resource leveraging is only associated with customer data storage and integration and data insight and not digital marketing applications and digital marketing investment. There is no association between opportunity creation and the AUDT.

In the model where the relationship between an EMO and the AUDT is mediated by ADT, the association between a customer value orientation and digital marketing applications and digital marketing investment is fully explained by having some knowledge of digital marketing technology. Knowledge and perceived value of digital marketing technology partially explain the relationship between customer value orientation and data insight and perceived value partially explains it with customer data storage and integration. The customer value orientation association with customer data storage and integration and data insight is weakened when mediated by ADT.

The negative association between an innovation focus and data insight is increased, and another negative association is introduced with customer data storage and integration with ADT as a partial mediator to explain them. There are no associations with digital marketing applications and digital marketing investment and an innovation focus.

The influence of risk management on usage of digital marketing applications, customer data storage and integration and data insight is weaker with ADT mediation. Perceived value only partially explains the association with customer data storage and integration and data insight. Again, there is no association with digital marketing investment.

Knowledge fully explains the association between a resource leveraging orientation and digital marketing applications and investment – this becomes a new positive and significant association. When ADT mediates the association with a resource leveraging orientation and customer data storage and integration, its impact strengthens but weakens with data insight. Knowledge and perceived value of digital marketing technology partially explains the association with data insight.

There is no partial or full mediation of ADT and the association between opportunity creation and the AUDT.

At the second order level, the analysis model has stronger relationships between the three variables than at the more complex first order level where some relationships are moderate, but the majority are weak. This may be explained in statistics by adapting Heisenberg's (1927) uncertainty principle of using multivariate analysis that makes expressions of relationships more powerful but the explanation of those relationships harder to elucidate. As a predictive model, its relevance is small but is acceptable for use in further research studies.

There is a strong influence of an EMO on the ADT and a large effect when explaining the relevance of an EMO to ADT. As EMO increases, there will be a moderate effect on ADT. When adding ADT as a mediator to an EMO and the AUDT, there is a medium influence and a moderate effect as an explanation, as an EMO increases there will be a moderate influence on the AUDT. The association between ADT and the AUDT is weakest but its relevance to explain AUDT is large with a moderate increase as ADT improves.

6.12 Conclusion

The findings from this research study are discussed in their entirety in the next chapter, and there are some findings that are of particular interest. Opportunity creation is not statistically significant with or without knowledge or perceived value as mediators of its influence on the adoption and use of digital marketing technology. The negative significance of an innovation focus and data insight also warrants further investigation as do the nuanced arguments of those relationships that have small, weak or moderate statistical associations.

CHAPTER 7

DISCUSSION

7.1 Introduction

This chapter discusses the research results from the analysis of the constructs of an entrepreneurial marketing orientation (EMO), attitude towards digital marketing technology (ADT) and the adoption and use of digital marketing technology (AUDT) and their respective relationships. The multivariate analysis was carried out using the partial least squares structural equation modelling method (PLS-SEM). Statistically significant and non-significant findings at the various stages of the model analysis process are interpreted. Of primary importance are the theoretical and practical implications of the study and the contribution it makes to the field of entrepreneurial marketing (EM) and small tourism business (STB) adoption and use of digital marketing technology.

The analysis model was developed iteratively to simplify the complex analysis that was necessary to establish the research objectives. The model complexity (due to the number of first order construct relationships being evaluated) was reduced by the iterative development of three substantive analytical models.

(a) Model 1 evaluated the individual direct relationships between the first order constructs of **EMO** - Customer Intensity (CI); Innovation Focus (IN); Opportunity Focus (OF); Proactivity (PR); Resource Leveraging (RL); Risk Management (RI); Value Creation (VC) - and **AUDT** (Digital Applications – APPS; Investment – INV; Customer Data Storage and Integration – DSI; Customer Data Analysis – CDA; and Decision Making – DM). This model tests the hypothesis that the characteristics of an **EMO** positively influence the components of the **AUDT**.

(b) Model 2 assessed the effect of the first order constructs of **ADT** – Awareness (AW); Knowledge (KN); Experience (EX) and

Perceived Value (PV) on the direct relationships between the reliable and valid first order constructs of **EMO** and **AUDT** from Model 1. This second analysis model introduced **ADT** by taking the **EMO** and **AUDT** constructs that were adequately measured by their indicators and did not exhibit correlations with other constructs in the model. The relationships that were not significant in Model 1 were re-introduced back into Model 2. This was necessary in order to investigate whether **ADT** significantly mediated any of the **EMO** and **AUDT** construct relationships. This approach was justified as some non-significant relationships in Model 1 were found to be significant when mediated by the first order constructs of **ADT**.

(c) Model 3 converted the first order constructs of **EMO**, **ADT** and **AUDT** into composite indicators and described the relationships between them at the higher, second order level. In this model, the first order constructs of **EMO**, **ADT** and **AUDT** became formative measurement items, and the direct and indirect relationships between the higher level constructs evaluated to assess the difference between the models at the first and second order level.

In this chapter, each of the constructs that represent EMO and ADT and their respective impact on the elements of AUDT are discussed in relation to Model 1 and Model 2. The discussion covers the statistically significant and not statistically significant relationships between five EMO constructs, the two mediating ADT constructs and four AUDT constructs. In Model 3, direct relationships between the second order constructs are analysed using the remaining first order constructs as their composite indicators. Significance was estimated using positive and negative path coefficient values, the f^2 effect, and the R^2 effect in all three models.

Each construct as a characteristic of an EMO and their influence on AUDT is separately discussed - customer value (section 7.2); innovation focus (section 7.3); opportunity creation (section 7.4); resource leveraging (section 7.5); and risk management (section 7.6). Whilst none of the associations were statistically strong, there were varying levels of statistically significant associations and effects

between the constructs and the importance of these findings from each model are discussed. Section 7.7 discusses the results of Model 3 that measured the relationships between the second order constructs of EMO, ADT and AUDT.

7.2 Customer value orientation and the adoption and use of digital marketing technology

Customer value is one of marketing's more difficult concepts to grasp due to its subjective nature and comes from knowing the customer and the value they place on the services a business has to offer. Focussing on providing customer value through digital marketing technology in tourism businesses can be achieved by using digital applications that facilitate customer communication, which may then be recorded, stored and analysed to generate customer insight that may be used for marketing strategy and decision making (Ateljevic 2007). However, this is neither a single nor an arbitrary process and to use digital marketing technology effectively requires some form of knowledge, understanding, skill set (Wolcott et al. 2008; Jones et al. 2014; Leeflang et al. 2014; Alford and Page 2015) and a mind-set within the decision maker.

Within a service industry such as tourism, it could be expected that a focus on creating or increasing customer value would be important across all areas of the business. Indeed, nine of the EM outcomes in the literature summary Table 3.4 (chapter 3, pp.76-78) mention customer value resulting from businesses looking for opportunities and focusing on the customer. This study found customer value (CV) has a direct and positive relationship with all four first order constructs of AUDT – digital marketing applications (APPS), digital marketing investment (INV), customer data storage and integration (DSI), and data insight (DI). As first order constructs of ADT, knowledge and perceived value of digital marketing technology have significant associations with AUDT to create customer value. The direct association between both ADT first order constructs and an orientation towards providing or improving customer value is relatively weak statistically in Model 2 (knowledge path coefficient 0.334 and perceived value path coefficient 0.233). The statistical significance of the effect of knowledge and perceived value of digital marketing technology as mediators is explained in Model 2.

The following sections discuss the influence of a customer value orientation in relation to each of the elements of the four AUDT constructs – 7.2.1 customer value and digital marketing applications; 7.2.2 customer value and digital marketing investment; 7.2.3 customer value and customer data storage and integration; and 7.2.4 data insight.

7.2.1 Customer value orientation (CV) and digital marketing applications (APPS)

Broadly, digital marketing applications operate across three different channels - communication channels providing information to the customer (for example websites and social media pages), paid for advertising on other digital communication channels and digital analysis applications (for example Google Analytics™). This study investigated the impact of a customer value orientation on these types of digital marketing applications and considered them a holistic group. The Model 1 results of the analysis for this direct relationship are given in Table 7.1 and the indirect relationships in Model 2 are presented in Table 7.2 on p.215.

Table 7.1: Model 1 Direct relationship effects between a customer value orientation and the adoption and use of digital marketing applications

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
CV	→	APPS	0.320	0.098	Small	0.312	Moderate/weak

In Model 1, a customer value orientation was the construct created from combining customer intensity and value creation as an influence on the AUDT and to estimate the size of its effect. There is a positive direct relationship (coefficient value) between a customer value orientation and the adoption and use of digital marketing applications. However, the association between the two constructs is weak; the relevance of a customer value orientation to the explanation of the level of adoption and use of digital marketing applications is small (f^2 effect). Because the direct relationship is weak, there is little change in the use of digital marketing applications in the STB as the level of importance of delivering customer value increases for the owner-manager (R^2 effect).

Consequently, it is necessary to establish why this relationship is weak as a focus on creating customer value has been shown to be at the heart of marketing (for example, Prahalad and Ramaswamy 2004) and a core requirement for service industries (Shaw and Williams 2010). Indeed, customer value is communicated through products and services that can utilise digital marketing applications such as websites to provide information and create customer value (Simmons et al. 2011).

The key to digital marketing applications and EM, is the ability of a business to build relationships with the customer (Hills et al. 2008; Hills et al. 2010; Jones and Rowley 2011; Ioniță 2012; Jones et al. 2013b) and this is achieved through knowing and understanding the customer (see Table 3.2, p.60). However, there are different types of applications that can achieve different business objectives – such as those that generate customer data, those that personalise customer communication and those that analyse customer data. Understanding why a customer value orientation is not influencing the adoption and use of digital marketing applications to any great extent could be of great importance to the STB because of the increasing emphasis and reliance that customers are placing on digital technology. One reason for the weak relationship between digital marketing applications and a customer value orientation may relate to the applications that the STB uses to communicate with customers.

When it comes to the business use of customer facing digital communication channels, for example owned websites and social media pages or linking to non-owned channels, digital marketing technology can meet customer expectations by providing the ability to book online, explore features of the service offering, provide a means of contacting the business, and to comment on the service experience. This helps to build relationships in advance of the actual customer experience and creates confidence and trust according to the customer orientation of the EMICO framework (Jones et al. 2013b). Whilst these marketing applications may be digital and capable of two-way communication, they may simply be used to provide the information that the owner-manager considers to be relevant to the customer base without any direct input from the customer. In other words, the digital communication channel is used in the same way as the traditional printed

leaflet or brochure and does not involve customer participation and potential co-creation of value (Jones et al. 2013b).

Providing marketing information via a static digital channel to the customer without any form of available digital interaction does not necessarily constitute digital marketing. Neither does it fundamentally change how the business communicates to customers. It is just using an alternative communication method, a digital communication channel. In these instances, the digital communication channel (website) may simply include a phone number and an email address for enquiries and bookings without any interactive links that take the visitor to a contact form within the site. The business email address may not be integrated with the digital channel and subsequently creates disparate digital information on a separate platform or system that is difficult to integrate. An integrated online enquiry form on a digital channel can combine visit data, past site visits, time of visit and duration of visit to a unique identifier that can then be associated with the enquiring or booking customer's device.

Many STBs have outsourced booking systems (e.g.booking.com) and pay agency commission and whilst the customer and their information may materialise in the form of a visit or a stay, the business-owner is missing the data from abandoned bookings and any website visit patterns that do not result in bookings (Chaffey and Patron 2012). The outsourced booking form will navigate the enquirer away from the STB website, and the agency will have proprietary rights over the enquiry from that moment or until the booking is confirmed or discontinued. This so called 'shopping cart' information is, or is not, made available to the STB according to the operating terms of the agency and at an agreed fee the agency charges. Therefore, the owner-manager may also be missing the greater potential reward of this insight for marketing decisions (Chaffey 2011) and not able to ascertain the value of it to their business.

Digital marketing applications such as e-mail and owned websites facilitate communication opportunities and enable personalisation (Simmons et al., 2008, Harrigan et al. 2012b) that can provide a more valuable customer experience. Data integration from different channels is required to provide complete personalised

communication – details of past visits, tailored offers and promotions responses, information about new experiences that may be of interest (based on digital interaction). Integrating digital systems takes time and is costly and the potential benefits may not be realised because of low levels of investment.

Digital applications that are used for analysis can establish different digital data sources - where the enquiry has come from e.g. a digital advertisement, a search engine and so on - and can identify patterns, similarities, and locations. Analytics can help the business create customer profiles that can identify where the relationship may become more profitable for the business and provide greater value for the customer (Ransbotham and Kiron 2018). These profiles may then be used for customer recruitment through tactical messaging on digital marketing applications such as social media that can be accurately targeted with the appropriate privacy permissions. However, the concept of value in this instance may not manifest itself in existing customer value but may well be of value for the business by using existing customer data to find similar, new customers.

To make effective use of the insight from customer data generated by digital marketing technology and that digital applications can analyse, requires skills and competences that the small and micro-business owner may not possess and may not be easily accessible. The development of new digital tools and applications is continual. Evaluating and choosing the appropriate tools appropriate to achieve business objectives requires specific competences (Leeflang et al. 2014) and it takes time to learn how to effectively use them (Chaffey and Patron 2012). Consequently, knowledge of digital marketing technology and its capabilities for creating customer value become key to the owner-manager's understanding of how to use it.

The mediating (or explanatory) effects of the ADT constructs knowledge and perceived value on the relationship between a customer value orientation and the adoption and use of digital marketing applications are discussed next with the statistically significant results in Table 7.2.

Table 7.2: Model 2 Indirect mediating relationship effects between a customer value orientation and the adoption and use of digital marketing applications (fully mediated by knowledge of digital marketing technology)

KN
↗ ↘
CV **APPS**

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
CV	→	KN	0.334	0.143	Medium	0.550	Moderate
KN	→	APPS	0.396	0.188	Medium	0.364	Moderate/weak

At this point, the constructs that represent attitude towards digital marketing technology by the owner-manager start to explain the findings in the form of knowledge and perceived value of digital marketing technology and their mediating effect in Model 2. The direct relationship between knowledge and digital marketing applications becomes fully mediated and the direct relationship is removed from the model, in other words, knowledge fully explains why the relationship between customer value and digital marketing applications is relatively weak. This finding is consistent with numerous studies (for example Dredge et al. 2018) that knowledge of digital marketing applications is an issue for small business owners and more specifically knowledge of how to create customer value through them.

As part of attitude, perceived value of digital marketing technology is not included in Table 7.2 as it has no mediating effect on the relationship between a customer value orientation and the adoption and use of digital marketing applications. This indicates that the owner-manager does not understand the value of digital marketing applications and their ability to help create customer value for the STB. Ambivalence could be connected to their relevant knowledge of digital marketing technology and whilst that relationship is significant it is not enough to influence greater use, it is knowing how to use it to create value that is the key.

In terms of contribution, the predictive relevance of knowledge of digital marketing technology for its adoption and use is verified along with studies such as Ritchie and Brindley (2005); Simmons et al. (2008); Wolcott et al. (2008); and Peltier et al. (2009). However, this element of the study relates to the adoption and use of digital marketing applications and the data and predictive relevance of the

analysis model. If the knowledge of digital marketing applications was increased in small business owners-managers, digital marketing applications could be used to greater effect and productivity improved through creation of customer value (Martin and Matlay 2003; Chaffey and Patron 2012; Eid and El Gohary 2013).

7.2.2 Customer value orientation (CV) and digital marketing technology investment (INV)

By investing money, time and effort into digital marketing technology, STBs have the option to keep pace with the changing demands and needs of their customers and potential customers and keep up to date with the latest digital marketing technology developments. In this study, investment is expressed by the amount of money and time the business spends on digital marketing technology. The results of the analysis for this direct relationship in Model 1 are given in Table 7.3.

Table 7.3: Model 1 Direct relationship effects between a customer value orientation and investment in digital marketing technology

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
CV	→	INV	0.385	0.174	Medium	0.148	Weak

Whilst customer value is the only EMO first order construct that has a significant direct relationship with investment in digital marketing technology, once again, the association is weak. However, a customer value orientation has some relevance to digital marketing investment by STBs, but that investment does not change to any great extent in order to generate customer value. In other words, digital marketing technology investment happens regardless of customer value orientation.

Therefore, factors other than a customer value orientation may drive investment in digital marketing technology in STBs. Competitor pressure has been found to be a driver of adoption of digital marketing technology (Wymer and Regan 2005) and marketing in small businesses is often reactive to competitor activity. STB owner-managers may see no choice in having a digital presence and, consequently, may not be fully engaged with it whether the digital marketing technology is free of charge.

Leeflang at al. (2014) identified the difficulty in assessing the effectiveness of digital marketing technology as a reason for a lack of adoption and therefore, of investment. A key finding in some studies is that measuring the return on digital marketing investment is a barrier to adoption (Thompson et al. 2013; Jones et al. 2014; Leeflang et al. 2014; Alford and Page 2015), and if return cannot be measured, investment is unlikely to be substantial.

According to Jones et al. (2013b), any investment in the business is part of the framework of an entrepreneurial orientation (see Table 3.3, p.74). The implication of the result in Table 7.3 is that the owner-managers in the sample are not entrepreneurial in their approach to marketing, or they do not see how customer value can be created by investing their money and time in digital marketing technology. Specific investment in digital marketing technology may provide the customer with greater value by offering a more personalised digital experience and a reason to be loyal, but that value may not necessarily translate into greater expenditure by new and existing customers. In order to provide a more personalised service and to understand the existing customer base to find new customers, investment in more complex systems and analytical tools are required.

The statistical evidence of the weak positive relationship between a customer value orientation and investment may reflect the need for certainty by the owner-manager that the investment will accrue benefits and be feasible to the business as well as the customer, as found by Hjalager (2002). Thompson et al. (2013) found that being innovative (and using innovative new digital marketing technology for the business), is not guaranteed to be successful. If the owner-manager cannot identify and measure the benefits that digital marketing technology will provide to both the business and the customer by increasing customer value, then investment does not occur and customer value may be added in other ways. Consequently, risk averse managers are more likely to be less innovative with their use of digital marketing technology, and therefore, invest less.

Given the benefits of investing money in digital marketing technology must be clear and measurable for the STB owner-manager (Elliott and Boshoff 2007; Aldebert 2011), the same applies to the time they spend on digital marketing. Time

is required to develop skills and expertise in assessing digital marketing tools and applications (Harrigan et al. 2012b; Leeflang et al. 2014) for investment as well as for learning how to use them (Chaffey and Patron 2012). Owner-managers are often time poor, they work long hours (Getz and Carlsen 2004) and they juggle priorities between the business functions of marketing, administration, personnel and finance management (Ioniţă 2012) – a characteristic of micro businesses that make up over 80% of the data sample in this study.

The statistically significant mediating effects of knowledge and perceived value of digital marketing technology on the relationship between a customer value orientation and digital marketing investment are presented in Table 7.4.

Table 7.4: Model 2 Indirect mediating relationship effects between a customer value orientation and digital marketing technology investment (fully mediated by knowledge of digital marketing technology)

KN
↗ ↘
CV **INV**

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
CV	→	KN	0.334	0.143	Medium	0.550	Moderate
KN	→	INV	0.422	0.216	Medium	0.178	Weak

Having knowledge and an understanding of the benefits that digital marketing technology provide in relation to customer value and how that value will benefit the business becomes key for the owner-manager when investment is considered. Therefore, in Model 2, knowledge of digital marketing technology again explains the relationship between customer value and investment by fully mediating it and the direct relationship is removed from the model.

Knowledge as a mediator explains why the association is relatively weak because if there is a lack of knowledge, there will be a lack of investment, particularly in risk averse owner-managers. This finding is consistent with Hjalager (2002) who found that small businesses tend to follow new initiatives only after they have assured themselves that the investments or changes fulfil the business and customer need. Indeed, this finding also links to Harrigan et al. (2012b) and the paradox that STBs can remain competitive by making small technology

investments as long as the focus remains on enabling the customer-oriented processes that are inherent in their everyday operations and that contribute towards their unique advantage over larger competitors.

As most forms of marketing have cost implications for a business that are often controlled by finances and limited cash flow, there is a probable relationship to the goals of the business or the business-owner (Hills et al. 2010; Franco et al. 2014). Marketing is considered as an investment in thriving organisations to engender success (Gilmore et al. 2013; Kumar 2015) but may not be so important for businesses that have no desire to grow.

Perceived value of digital marketing technology has no mediating effect as the relationships with a customer value orientation and digital marketing technology investment are not statistically significant and therefore, is not included in Table 7.4. The STB owner-manager perceived value of digital marketing technology is of no consequence when it comes to investment.

The contribution this study makes to the focus on customer value as a reason for investing in digital marketing technology comes in part from the expectation that businesses are not maximising their investment in a digitally pervasive environment. However, there is only a weak relationship, and a lack of knowledge explains the limited time and money that is invested in digital marketing technology and that in turn, restricts the amount of customer value being created through missed opportunities.

The tourism sector increasingly relies on digital marketing technology in order to compete regionally, nationally and globally, mainly because of the tourism customer's adoption of digital technology (Alford and Jones 2020). Therefore, this paradox with the lack of investment in STBs needs to be understood in order to address the imbalance.

7.2.3 Customer value orientation (CV) and customer data storage and integration (DSI)

In this study, customer data storage and integration relate to the customer information generated by digital channels that the business uses for marketing purposes and how the business integrates separate digital data sources to connect and co-ordinate individual customer data, to personalise communication, provide insight and inform marketing decisions. The results of the Model 1 analysis for this third direct relationship with a customer value orientation are given in Table 7.5.

Table 7.5: Model 1 Direct relationship effects between a customer value orientation and customer data storage and integration

Directional Relationship			Relationship Coefficient	Strength of Relationship			
Exogenous		Endogenous		f^2 Effect		R^2 Effect	
CV	→	DSI	0.286	0.053	Small	0.377	Moderate/weak

The association between a customer value orientation and customer data storage and integration is the weakest of all the direct, positive relationships between customer value and the AUDT first order constructs. Creating customer value has little effect on whether a STB stores and integrates customer data or not. This can be linked to the STB owner-manager lacking in customer knowledge from digital data – suggesting that they do not know they can generate valuable information from digitally generated customer data. There is evidence from research that small businesses recognise the value of developing customer relationships by knowing and understanding their customers. This occurs as a consequence of their everyday activities and interactions with their customers and the feedback process (Friel 1998; Sullivan Mort et al. 2012) but this has not translated into the digital environment. STBs offer superior customer service and customisation through their close contact with regular and repeat customers (Friel 1998). In other words, STB owner-managers recognise the importance of customer knowledge to build relationships, but the findings in this study suggest there is a gap in creating customer value by integrating digital customer data sources. The fact that the association is weak highlights the lack of integration of customer data even if a focus on creating customer value is important to the STB owner-manager.

Whilst digital marketing technology can make customer data more accessible and easier to manage (Harrigan et al. 2012a), this study supports business owner-managers having difficulty integrating digital customer data and the information customer data can provide into existing management and marketing practice (Chaffey and Patron 2012; Harrigan et al. 2012b; Royle and Laing 2014).

The databases and record systems where STBs store customer information are often rudimentary and unconnected according to Ateljevic (2007) and, the business-owner is not taking advantage of the rich source of information that results from combining numerous multiple digital data sources (Ateljevic 2007). The business owner may be content with the current customer information system in operation and consequently, the question remains as to whether the business-owner deems customer data storage and integration necessary to improve the service that is currently on offer. Not knowing where to start to integrate digital customer data into existing marketing activity may also explain the weak relationship between a customer value orientation and customer data storage and integration. Consequently, digital marketing if practiced, is likely done without strategic thought and planning, and does not result in customer service advantages and marketing performance gains as found by Martin and Matlay (2003).

Knowledge and perceived value of digital marketing technology as mediators of the relationship between a customer value orientation and customer data storage and integration are now discussed and the statistically significant relationships presented in Table 7.6.

Table 7.6: Model 2 Indirect mediating relationship effects between a customer value orientation and customer data storage and integration (partially mediated by perceived value of digital marketing technology)

PV
↗ ↘
CV → DSI

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
CV	→	PV	0.233	0.057	Small	0.563	Moderate
PV	→	DSI	0.302	0.066	Small	0.400	Moderate/weak
CV	→	DSI	0.176	0.022	Small	0.400	Moderate/weak

Knowledge of digital marketing technology neither fully nor partially mediates the relationships between a customer value orientation and customer data storage and integration, therefore it is not included in Table 7.6. The relationships with knowledge of digital marketing technology are not statistically significant. This may reflect a lack of understanding and knowledge of how customer value may be added through customer data storage and integration into marketing practices.

The result that customer value and customer data storage and integration is partially mediated by the perceived value of digital marketing technology (PV) indicates that the owner-manager understands the importance of customer data to creating customer value. However, the strength of the relationship is reduced with mediation, so customer data storage and integration become less relevant to customer value. This is possibly because owner-managers believe that storing and integrating customer data may not add new information to what they already know of their customers, or that they are unaware how to use that information to the benefit of the customer or the business. What is known about existing customers may facilitate the search for new customers through digital marketing technology (Harris and Rae 2009), potentially adding business value but not enhancing the value existing customers receive.

7.2.4 Customer value orientation (CV) and data insight (DI)

In Model 1, data insight was the construct created from customer data analysis and decision making. By creating data insight as a construct of AUDT, this study established how a customer value orientation influences the analysis of customer data within the STB to generate insight for marketing decision making. The results of the Model 1 analysis for this final direct relationship between a focus on customer value and data insight are shown in Table 7.7.

Table 7.7: Model 1 Direct relationship effects between a customer value orientation and data insight

Directional Relationship			Relationship Coefficient	Strength of Relationship			
Exogenous		Endogenous		f^2 Effect		R^2 Effect	
CV	→	DI	0.438	0.159	Medium	0.541	Moderate

Having a focus on creating customer value and data insight has the strongest association of all EMO first order constructs to the AUDT constructs. As previously stated, none of the associations were strong but the relationships between a customer value orientation and data insight was the strongest. The greater the importance of creating customer value to the STB, the greater the influence on the adoption and use of digital marketing technology to generate insight. This finding provides evidence demonstrating the recognition by the STB of the value of digital marketing technology to generate insight into customers.

From a cultural perspective for STB marketing, the importance of the customer is key and central in guiding the organisation (Morris et al. 2002) and so it makes sense to know as much as you can about your customers. The ability to create customer value comes from the intelligence of the STB owner-manager having a market and customer orientation to generate ideas (Jones et al. 2013b - Table 3.3, p.74). Customer insight and value-creating activities come from close and integrated customer relationships (O'Dwyer and Gilmore 2013). Value creation is also dependent on customer feedback that is co-created through active, continuous dialogue and ongoing assessment of needs (Morris and Lewis 1995), reflecting a culture of vigilance and continuous dialogue with the customer. STBs know the importance of understanding their customers in order to provide high quality customer service (Jones et al. 2004) but as those customers are migrating to digital channels in ever-increasing numbers, if the businesses do not adjust to this customer behaviour, they will be left wanting.

Research into small businesses (for example Adobe 2014; Royle and Laing 2014) has highlighted a piecemeal digital marketing approach where digital marketing technology is 'bolted on' to existing practices rather than integrating it into a marketing communications plan. This approach is not done through an understanding of how digital marketing technology can benefit the customer and is symptomatic of other forces driving the adoption and use of digital marketing technology in small businesses, other than the owner-manager. For example, the owner-manager may consider a business website as a digital necessity but does not employ the use of web analytics to understand more about the unique visits to the site and how website visit information may be used for marketing communication.

Nevertheless, the STB owner-manager knowing their customers from a digital perspective is most challenging for a number of reasons. First, businesses are awash with customer data (de Swaan Arons 2014). Second, there is difficulty in choosing which digital marketing technology to use (Andal-Ancion et al. 2003). Finally, there is a need to develop the ability and skills to generate and leverage deep customer insights from that data (Leeflang et al. 2014).

The motivation to create customer value comes from possible subsequent repeat transactions and customer loyalty (Shaw and Tamilia 2001). High performing marketers are able to integrate customer data of what their customers are doing with knowledge of why they are doing it, providing new insights into their needs and how best to meet them (De Swaan Arons et al. 2014). However, skills are required for creating, discovering and continually redefining value through the close association with the customer (Morrish et al. 2010), particularly through digital marketing technology, and that may be a reason why the association between customer value and data insight is not as strong as it could be in STBs.

When it comes to EM, the word intuitive is often used when describing the entrepreneur and their style of marketing. Ardley (2006) states that EM is the practice of acquiring and implementing competences that are shaped by both intuitive and rational thinking from the behavioural response by the individual. EM is intuitive and informal (Collinson and Shaw 2001; Ioniţă 2012; Fillis 2015) but data analytics is described as a science (Kotler and Keller 2016) and the owner-managers may prefer to trust their instincts (Quinton and Harridge-March 2006; O'Dwyer and Gilmore 2013) as opposed to the data science that is presented to them through digital analysis reports. Indeed, making the link between the analytical, scientific data and marketing is a skill that is in high demand across every industry and those that offer it, come at a price.

The mediating effect of the ADT constructs knowledge and perceived value of digital marketing technology is now discussed (Table 7.8).

Table 7.8: Model 2 Indirect mediating relationship effects between a customer value orientation and data insight (partially mediated by knowledge and perceived value of digital marketing technology)

			KN ↗ ↘ CV → DI	PV ↗ ↘ CV → DI			
Directional Relationship			**Relationship**	**Strength of Relationship**			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
CV	→	KN	0.334	0.143	Medium	0.550	Moderate
CV	→	PV	0.233	0.057	Small	0.563	Moderate
KN	→	DI	0.221	0.042	Small	0.565	Moderate
PV	→	DI	0.181	0.029	Small	0.565	Moderate
CV	→	DI	0.227	0.050	Small	0.565	Moderate

Both knowledge and perceived value of digital marketing technology partially mediate the relationship between customer value and data insight, in other words they partially explain why it is significant. In order to adopt and use digital marketing technology for data insight, the owner-manager must understand how it will add to customer value and the importance of the value creation over their own instincts and intuition.

Further research may shed light on what the STB owner-managers considers to be customer value which may then help develop an understanding of how it may be enabled through marketing technology. This study has recognised that the STB owner-manager is aware of the insight that marketing technology can provide and yet, there is still a considerable way to go for them to effectively use that marketing technology for customer value.

There is a requirement for a behavioural change by the owner-manager to acquire the skill set to effectively utilise integrated customer data by investing time in digital marketing technology (Vatash 2018). An alternative is to employ the services of an agency or expert by investing the limited finances of the STB. Both require the STB owner-manager to be assured of the return on the investment and that is a challenge as previously discussed.

7.3 Innovation focus and the adoption and use of digital marketing technology

A number of studies have identified a paucity of innovation by tourism businesses. Thomas et al. (2011), considered STBs to be the economic lifeblood of the industry yet found they lacked innovation and labelled them as laggards that prevented innovation and growth. According to Shaw and Williams (2010) small and medium tourism businesses are generally not considered entrepreneurial or innovative, but where they are, they are significantly different to other sectors in that they are more likely to innovate because of customer needs.

This study supports these perspectives and finds that an innovative orientation offers only one direct, significant relationship with the data insight first order construct of AUDT. There are no direct associations with the use of digital marketing applications, digital marketing investment or customer data storage and integration. Paradoxically, the direct relationship between an innovative focus and data insight is negative.

This negative and generally weak relationship between an innovation orientation and data insight is explored in more detail below through the partial mediation of perceived value of digital marketing technology. The relationship between an innovation focus and customer data storage and integration is also brought back into the model through the partial mediation of perceived value of digital marketing technology, and again the relationship is a negative one.

7.3.1 Innovation focus (IN) and customer data storage and integration (DSI) and data insight (DI)

From all of the significant direct relationships between the EMO and AUDT constructs, none had a weaker association than an innovation focus and data insight. It was the only significant direct relationship, and it was the only negative relationship, as can be seen in Table 7.9.

The negative relationship indicates that as an innovation focus increases within the business, there is less adoption and usage of digital marketing technology for data

insight and the f^2 effect size or influence is small when explaining the use of data insight for innovation. As an innovation focus increases, the variance in data insight is moderate.

Table 7.9: Model 1 Direct relationship effects between an innovation focus and data insight

Directional Relationship			Relationship Coefficient	Strength of Relationship			
Exogenous		Endogenous		f^2 Effect		R^2 Effect	
IN	→	DI	-0.170	0.030	Small	0.541	Moderate

This finding indicates that innovative STB owner-managers do not use digital marketing technology for innovation and seek alternative ways of creating new ideas for their business. The fact the STBs can become overwhelmed with digital customer data may be interpreted as a reason for the business owner to be disillusioned with data analysis technology and to turn away from it – explaining the negative association.

These findings do not necessarily agree or disagree with research that states STBs are not innovative – more that the innovative owner-manager is not using digital marketing technology as a source of innovation – new ideas and creativity may be coming from elsewhere, if they are in evidence at all. The negative association may be explained by STBs favouring non-growth strategies, a characteristic of some tourism businesses (Komppula 2014). It may also be explained by the reliance of the business network to foster innovation in the STB (Hjalager 2010; Bredvold and Skålén 2016) especially in rural areas (Jones et al. 2004; Komppula 2014).

The direct relationships between an innovation focus and digital marketing applications, digital marketing investment, and customer data storage and integration were not significant in Model 1. Having an innovation focus has no influence on the use of digital marketing applications in this study – so any digital applications that are being used, are not being used to create new ideas, products and services. It is possible that the owner-manager sees some applications as a necessary requirement (i.e. a website) because of online competition and the searching and booking trends of consumers. However, as previously discussed, the website may be used to communicate in the same way as printed material, so there

is no difference to what the business has always done, they are just using a different way of communicating and the digital opportunities are not utilised.

The indirect relationships between an innovation focus and customer data storage and integration and data insight through knowledge and perceived value of digital marketing technology as mediators are presented in (Table 7.10).

Table 7.10: Model 2 Indirect mediating relationship effects between an innovation focus and customer data storage and integration and data insight (partially mediated by perceived value of digital marketing technology)

				PV ↗ ↘ IN → DSI		PV ↗ ↘ IN → DI	
Directional Relationship			**Relationship**	**Strength of Relationship**			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
IN	→	PV	0.297	0.115	Small	0.563	Moderate
PV	→	DSI	**0.302**	0.066	Small	0.400	Moderate/weak
IN	→	DSI	-0.263	0.059	Small	0.400	Moderate/weak
PV	→	DI	0.181	0.029	Small	0.565	Moderate
IN	→	DI	-0.238	0.067	Small	0.565	Moderate

In Model 2, knowledge of digital marketing technology neither partially nor fully mediates the direct negative relationship between an innovation focus and customer data storage and integration and data insight, which reflects the owner-manager not being aware of how to use customer data generated from digital marketing technology for new customer, market, product or service innovations. An innovative focus is not a reason to use digital marketing applications or to invest time and money in digital marketing technology for the businesses in this study.

The perceived value of digital marketing technology partially mediated the relationship between an innovation focus and customer data storage and integration (not significant in Model 1) and data insight in Model 2. The relationship with customer data storage and integration has become statistically significant, however, there is still a weak variance and the direct relationship has a negative association (Table 6.18, p.184). This suggests that the owner-manager does not place any value on storing customer data nor the opportunities that may be created by integrating data. By not integrating customer data, STBs cannot enhance the

process of innovation as data integration can lead to rapid innovation and growth in some businesses (Franco et al. 2015).

The negative association between an innovation focus and data insight was increased and slightly strengthened when perceived value of digital marketing technology as a mediator was added into Model 2 (the result increased from -0.170 to -0.238). The perceived value of digital marketing technology partly explains the relationship between an innovation focus and data insight. Indeed, the negative association increases with data insight and therefore, the owner-manager may generate marketing ideas and creativity from other sources like the business network (Carson et al. 2004). Whilst the business network may not require the use of digital marketing technology as such, the network can be subject to change and is not necessarily a constant for the owner-manager. Subsequent use of digital marketing technology to maintain the business network may help to address any fluctuations.

Innovation is one of the entrepreneurial traits that can create customer value (Hills et al. 2008) as entrepreneurial owner-managers are driven by ideas and intuition that have a foundation in knowledge (Kurgun et al. 2011; Morrish 2011). An innovation orientation comes from knowledge and the collection of information according to Jones et al. 2013b in the EMICO framework (Table 3.3, p.74). Therein lays a gap in the STB owner-manager's knowledge and perceived value of digital marketing technology concerning innovation. From knowledge comes an understanding of value and subsequently the action of adoption and use (Fishbein 1967). Knowledge also leads to an understanding of the perceived benefits of digital marketing technology and ultimately its adoption (Davis et al. 1989). Therefore, a change in attitude of the STB owner-manager towards digital marketing technology is necessary to address this barrier to its adoption and use.

The results from this study identify with Shaw and Williams (2010) who found that innovation associated with IT and e-marketing is a significant challenge for tourism SMEs. The link here lays with the owner-manager and the learning process – first in the recognition that new knowledge and skills are required and second, the motivation to get them. Motivation in turn links to the goals of the business –

to develop and grow, to differentiate, and to expand the service offering – goals that are prerequisites for innovation. If digital marketing technology is to be used for innovation in the small business sector, it is done through the process of interactive, experiential learning (Sarasvathy 2001a) and the ability to articulate and continuously upgrade distinctive competences and capabilities (Stamboulis and Skayannis 2003) – part of the means of the STB owner-manager (Sarasvathy 2001a).

Being innovative and entrepreneurial with marketing differentiates individuals and does not necessitate being a pioneer (Morrish 2011), it can simply come from learning and being flexible in order to foster innovation (Schindehutte 2008; Barba-Sanchez et al. 2007). The skills, competences and experiences of the individual are therefore essential in sustaining an innovation focus. Indeed, the majority of small businesses often engage in a process of incremental innovation (Morris and Lewis 1995; Morris et al. 2003; O'Dwyer and Gilmore 2013). The data cases for this study are well-educated owner-managers with a further or higher education qualification (over 80% of the sample) thus they demonstrate an ability to want to and be able to learn, but knowing where to start is also a barrier (Ateljevic 2007; Leeflang et al. 2014).

An innovation focus and opportunity creation are two closely linked constructs in EM (Swenson et al. 2012) as opportunities are sought after and created through innovation (Renton et al. 2015). The findings in this study that relate to an innovation focus are connected to the presentation of opportunity creation in the modelling process, which is discussed next.

7.4 Opportunity creation (OC) and the adoption and use of digital marketing technology

The modelling process in this study resulted in the merger of two EMO first order constructs – namely opportunity focus and proactivity – labelled opportunity creation. Opportunity creation is firmly grounded in entrepreneurship with the entrepreneur having a proactive nature to recognise opportunities and exploit them through innovation (Ardichvilli 2003; Swenson et al. 2012).

In Model 1, opportunity creation had no significant direct relationships with any of the AUDT constructs. Opportunity creation was added back into Model 2 to establish whether knowledge or perceived value of digital marketing technology mediated any of the relationships with the AUDT constructs and again, none were found to be significant. Therefore, there are two aspects to be considered with the opportunity creation construct and its relationship with the AUDT constructs – firstly, the results in connection with the other findings in this study and the entrepreneurial nature of the business owner-managers in the data sample and secondly, the capabilities of the created construct to measure opportunity focus and proactivity.

This finding does not support research that links digital marketing to the process of opportunity creation through the information that it provides (Hills et al. 2008; Wolcott et al. 2008; Harrigan et al. 2012b; Jones et al. 2013b; Renton et al. 2015; Whalen at al. 2015). This evidence suggests that digital marketing technology can provide help to foster an opportunity focussed orientation for STBs, but there is no empirical evidence in this study that states why the relationship between opportunity creation and all the AUDT constructs are not significant. However, there is relevance to the findings of the other EMO characteristics and their relationships with the ADT and AUDT constructs.

The entrepreneurial nature of the STB owner-manager is epitomised through effectuation and the means available to them: who they are, what they know, and whom they know (Sarasvathy 2001a). This theory has resonance in opportunity creation as entrepreneurial owner-managers proactively use their ability, skill and competence to assesses the market and generate knowledge and intelligence from their experience and through their network. This intelligence is then used to create and exploit opportunities through innovation. With the weaker relationships between the EMO constructs and data storage and integration and data insight constructs (they number 12 out of the 16 significant relationships – Table 6.26, p.195), generating knowledge and insight from data for opportunity creation is not a priority for these STBs.

Understanding the reasons for the insignificance of opportunity creation is not possible from the findings in this study but it warrants additional investigation. If the STB owner-manager does not recognise how useful digital customer data is, or how to use it, then opportunities are difficult to identify. Therefore, further enquiry is suggested to investigate how important digital customer data is to the STB owner-manager and to establish how they create opportunities through customer data. Another field of enquiry would be specific to the STB owner-manager and their digital marketing skill set as small business research has also indicated that opportunity creation from the AUDT lies with the entrepreneurial business owner (Morris et al. 2002; Wolcott et al. 2008; Hills and Hultman 2013; Royle and Laing 2014). Furthermore, the findings that the associations between opportunity creation and the AUDT constructs are not significant present the possibility to explore how the STB collaborative business network may be used to facilitate adoption and use of digital marketing technology.

7.5 Resource leveraging orientation and the adoption and use of digital marketing technology

EM has been associated with the marketing approaches of small businesses with limited resources (Morris et al. 2002) because of the way that they make more out of less. In EM, the entrepreneur can use resources to create value, they optimise resources, and they can also accomplish their goals by putting to use the resources of others (Morris et al. 2002). Often, financial and resource limitations in small businesses suit an approach where leveraging resources for maximum return can be deemed a necessity if the business wants to develop and grow, or maybe even just to maintain its position and service offering.

Marketing technology may be regarded as a resource in itself, for example, a website and a Facebook page are communication resources as well as mechanisms to leverage other resources i.e. by generating customer data or as a means to extend the reach of the business network (associates, suppliers and partners). In order to make the most out of such resources, the STB owner-manager is required to make some sort of investment of time and money for the necessary skills to use digital marketing technology (Royle and Laing 2014; Alford and Page 2015). Therefore,

the relationship between resource leveraging and AUDT constructs can be considered from the view of marketing technology as a resource in its own right and from the view of what the owner-manager considers to be a business resource that may be enhanced by using digital marketing technology.

Effectuation (Sarasvathy 2001a) as part of EM again provides a useful framework when considering resource maximisation enabled by digital marketing technology by the owner-manager in STBs. Effectuation considers the business-owner from the perspective of who they are, what they know and whom they know. What the owner-manager considers to be business resources (e.g. the business network, staff with digital marketing skills) and their individual mindset, for example, the desire to learn, develop skills and understand how digital marketing technology can improve the business. In addition, there is the recognition of what the business owner knows themselves and what they need to know and do not know about digital marketing technology. Finally, digital marketing technology offers an opportunity to enhance and expand the network available to the business owner – or whomever they know. The business network is a key resource for the small business (Carson et al. 2004) as it may be used to provide and fill knowledge gaps (Jones et al. 2013a).

Knowledge and perceived value of digital marketing technology are statistically significant when it comes to the AUDT and resource leveraging. The direct association between knowledge of digital marketing technology and resource leveraging is moderate and has the highest value, and perceived value has the weakest positive association in Model 2 (knowledge path coefficient 0.480 and perceived value path coefficient 0.149) - the significance of the relationship is explained through mediation in Model 2.

The influence of resource leveraging is discussed next in relation to its relationship with digital marketing applications and digital marketing investment (Section 7.5.1) followed by customer data storage and integration (Section 7.5.2) and the Section concludes with an appraisal of its influence on data insight (Section 7.5.3).

7.5.1 Resource leveraging orientation (RL) and digital marketing applications (APPS) and digital marketing technology investment (INV)

There is not a statistically significant direct relationship between a resource leveraging orientation and the use of digital marketing applications or digital marketing technology investment in Model 1. Making the most of limited resources is not influencing the use of digital marketing applications or investment. This finding indicates that STB owner-managers may consider using some digital marketing applications as a drain on already limited resources as they require additional time, skills and expertise to use them effectively. These are resources that in general, they simply do not have, do not want to develop or they cannot afford. The finding may also be interpreted by considering how the STB owner-manager views the customer and their digital behaviour as a potential resource. The lack of statistical significance in the relationship with the use of digital marketing applications indicates that the STB owner-manager does not consider the customer data generated from the use of digital marketing applications as a possible resource.

The direct relationship of both digital marketing applications and investment to a resource leveraging orientation is fully mediated by knowledge of digital marketing technology and the findings are presented in Table 7.11.

Table 7.11: Model 2 Indirect mediating relationship effects between a resource leveraging orientation and the adoption and use of digital marketing applications and digital investment (fully mediated by knowledge of digital marketing technology)

			KN ↗ RL	KN ↘ APPS	KN ↗ RL	KN ↘ INV
Directional Relationship			**Relationship**	**Strength of Relationship**		
Exogenous		**Endogenous**	**Coefficient**	**f^2 Effect**		**R^2 Effect**	
RL	→	KN	0.480	0.295	Medium	0.550	Moderate
KN	→	APPS	0.396	0.188	Medium	0.364	Moderate/weak
KN	→	INV	0.422	0.216	Medium	0.178	Weak

In Model 2, the significance of a resource leveraging orientation influencing the use of digital marketing applications and investment is fully mediated by knowledge of digital marketing technology and it explains the non-significance of

the direct relationships. The STB owner-manager does not adopt and use digital marketing technology to leverage resources possibly because they do not understand or know how to use it and what to invest in to maximise their resources. Perceived value of digital marketing technology has no mediating effect statistically on either relationship, in other words, the STB owner-manager does not value the use of digital marketing technology as a way of maximising resources.

Making the best use of marketing technology as a resource requires the investment of time, money and skills. Regularly reviewing and refreshing the content and customer navigation through a STB website for example, takes time to upload, test and check. Utilising search engines as a paid form of advertising can extend the reach of the business into new markets. However, as previously stated, the STB owner-manager has difficulty in measuring the return on digital marketing technology investment (Royle and Laing 2014; Alford and Page 2015). Knowledge and experience of digital marketing technology are necessary to evaluate the benefits of digital marketing technology (Wolcott at al. 2008). If the STB owner-manager does not understand the value of the customer interacting with digital marketing applications (for example likes and shares of social media content), their adoption and use may wane as other priorities take over.

As an established dimension of EM, one of the most effective ways to create additional resources for the STB is through leveraging informal networks (Vasilchenko and Morrish 2011). The network fills gaps in marketing knowledge and can assist with specialist expertise (Jones at al. 2013a) which can create value for the business. Digital marketing applications may extend the business network through social media (for example LinkedIn™). Network collaboration is seen as a necessity for STBs (Shaw and Williams 2010; Ioniță 2012; Komppula 2014), particularly in rural areas however, new networks take time to develop and trust needs to be established before the benefits may be maximised (Gilmore 2011).

There is scope for investigating and comparing both the virtual and physical network as a resource for the STB and paying particular attention to the knowledge

they can provide for using digital marketing applications and investing in marketing technology.

7.5.2 Resource leveraging orientation (RL) and customer data storage and integration (DSI)

The association between the direct relationship of a focus on resource leveraging and customer data storage and integration is weak between the EMO and AUDT constructs and the results of the analysis in Model 1 are detailed in Table 7.12.

Table 7.12: Model 1 Direct relationship effects between a resource leveraging orientation and customer data storage and integration

Directional Relationship			Relationship Coefficient	Strength of Relationship			
Exogenous		Endogenous		f^2 Effect		R^2 Effect	
RL	→	DSI	0.250	0.047	Small	0.377	Moderate/weak

Having a resource leveraging orientation had little influence on storing and integrating customer data, and as making the most efficient use of resources increases, the change in storing and integrating customer data does not significantly (statistically) increase. Customer data when generated by digital channels is automatically stored on servers but this data may not always be downloaded to a customer database or to the STB computer systems. However, to make the most use of digital customer data and leveraging it as a resource, storing and integrating customer data is a necessity for marketing decision making. In addition, integrating different customer data sources enhances the information that is known about the customer and creates insight. Consequently, this result is consistent with the lack of influence on the use of digital marketing applications and infers that customer data is not considered as a resource for the STB.

In order to understand this result, consideration must be given to what the STB owner-manager considers as resources for the business – employees, the business network (associates, suppliers and partners), and most importantly customers (Jones et al. 2013a) and the information that customers provide. One important challenge for marketers in the digital era is the ability to identify and utilise in-depth customer insights from their data to effectively compete (Leeflang et al. 2014) and, for the STB, this responsibility lies with the owner-manager.

It is known that small businesses are not engaging in any great depth with the four advanced technologies of cloud computing, big data, social media and mobile technology (European Tourism Forum 2016). A possible reason for this is that the owner-manager does not consider digitally created customer data as a resource or does not know how to develop it as a resource that can create opportunities and be leveraged for a competitive advantage. They may feel they know enough about their customers and their requirements from experience, intuition, and the day-to-day interactions they have with them. As a result, the owner-manager may not consider that the investment required to create a customer database and integrate separate sources of data will provide sufficient return and build upon what they believe they already know. Moreover, as discussed above, the ability to measure such investment is not easy for the STB owner-manager.

The overwhelming nature of the amount of customer data that marketing technology creates may lead to a lack of storage and integration simply from the fact that the owner-manager does not know where to start. The business owner may need external resources to help decide which data to store and which data sources to integrate for the greatest return. With limited financial resources, the expertise may be beyond the reach of the STB owner-manager as well as the risk of relinquishing the control of such an important aspect of their business.

The mediation results for the relationship between a resource leveraging orientation and customer data storage and integration are presented in Table 7.13.

Table 7.13: Model 2 Indirect mediating relationship effects between a resource leveraging orientation and customer data storage and integration (partially mediated by perceived value of digital marketing technology)

PV
↗ ↘
RL → DSI

Directional Relationship			**Relationship**	**Strength of Relationship**			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
RL	→	PV	0.149	0.027	Small	0.563	Moderate
PV	→	DSI	**0.302**	0.066	Small	0.400	Moderate/weak
RL	→	DSI	0.294	0.076	Small	0.400	Moderate/weak

Once again and as with customer value, knowledge of digital marketing technology neither fully nor partially mediates the relationship between a resource leveraging orientation and customer data storage and integration, which may reflect a lack of understanding and capability to exploit digital resources. Perceived value does however partially mediate the direct relationship.

The result that resource leveraging and customer data storage and integration are partially mediated by perceived value of digital marketing technology is a limited explanation of the weak relationship. Whilst the association between the constructs strengthens, the direct relationship is significant and retained indicating that there is some perception that storing and integrating customer data maybe leveraged as a resource. However, the weakness of that direct relationship indicates that there is a lack of certainty, possibly due to doubts about which data to store and integrate and how to facilitate the use of it. Alternatively, the use of existing customer data and digital marketing resources may be deemed adequate by the STB owner-manager and further investment is not considered worthwhile. As knowledge is not statistically significant in this relationship, again, it comes down to the skills and expertise of the owner-manager in terms of digital marketing technology and how to make the most use of it.

7.5.3 Resource leveraging orientation (RL) and data insight (DI)

The direct influence of a resource leveraging orientation on the use of digital marketing technology for data insight is again weak (Table 7.14), albeit slightly above the average of all of the EMO and AUDT relationships.

Table 7.14: Model 1 Direct relationship effects between a resource leveraging orientation and data insight

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
RL	→	DI	0.296	0.086	Small	0.541	Moderate

The relevance of resource leveraging in explaining the use of technology for data insight is low, so digital marketing technology is not being used to know more about customers and to create marketing intelligence to any great extent. However, the greater the requirement to leverage these resources and learn more, the greater

the use of digital marketing technology would be to generate insight, indicating that there are opportunities that are being missed in the STB.

It is more than likely that the STB will not be generating customer information from formal market research due to the cost and may have an established local network as a source of information. However, with the changing opportunities that digital marketing technology provides the owner-manager will still need additional skills and help to identify knowledge gaps and which new knowledge to acquire (Hallin and Marnburg 2008). The business network is seen as a reliable resource for marketing in small businesses (Carson et al. 2004) and Franco et al. (2014) found that marketing by entrepreneurs is built and supported using networks. The business network is used to co-ordinate activities and share resources and information (Coviello et al. 2006) for the mutual benefit of all parties.

The business network of associates, suppliers and customers is relied upon for marketing when combined with digital marketing technology because value can be created through market intelligence, creativity and ideas generation (Hills et al. 2008; Jones et al. 2013a). Stable, structured networks with strong, well established links support marketing decision making (Carson et al. 2004) and can generate valuable information where the business owner may learn through joint initiatives that are affordable and have acceptable risk through sharing (Ioniţă 2012). The opinion of others has also been found to help individuals evaluate and develop trust in technology (Gefen et al. 2003; Ho et al. 2017). Digital marketing technology in the form of social media can provide both formal and informal networks and provide support that can help STB owner-managers that often feel isolated (Stokes 2000; Alford and Jones 2020). Indeed, some rural tourism businesses may find their business network becoming virtual from necessity rather than design, and further research may shed light into how this has led to business improvement.

Small businesses are not often in a position to make radical, innovative changes so may use the business network to foster innovation (Hjalager 2010), leading to incremental service and process improvements for a competitive advantage (O'Dwyer and Gilmore, 2013). Network collaboration is a critical factor for

successful growth in tourism (Shaw and Williams 2010; Ioniţă 2012; Komppula 2014). So once again, the link may be made that the goals of the business are compatible with growth and expansion in this study the businesses may simply not want to innovate and grow (Thompson et al. 2013).

Digital marketing technology allows a wider net to be cast in search of the right contacts, but care and attention is required by the owner-manager to nurture the business network and effectively utilise it (Wolcott et al. 2008). The business network does not just happen – the business owner-manager needs to invest time and effort to establish the best connections for the business in order that the quality of advice is beneficial (Gilmore 2011). If the adoption and use of digital marketing technology is not considered to develop the network, combined with the time poor owner-manager (Ritchie and Brindley 2005), this opportunity will be lost.

The mediating effects of the ADT constructs knowledge and perceived value of digital marketing technology on the relationship between a resource leveraging orientation and using digital marketing technology for insight and decision making are given in Table 7.15.

Table 7.15: Model 2 Indirect mediating relationship effects between a resource leveraging orientation and data insight (partially mediated by knowledge and perceived value of digital marketing technology)

				KN ↗ ↘ RL → DI			PV ↗ ↘ RL → DI	
Directional Relationship			**Relationship**	**Strength of Relationship**				
Exogenous		**Endogenous**	**Coefficient**	**f^2 Effect**		**R^2 Effect**		
RL	→	KN	0.480	0.295	Medium	0.550	Moderate	
KN	→	DI	0.221	0.042	Small	0.565	Moderate	
RL	→	PV	0.149	0.027	Small	0.563	Moderate	
PV	→	DI	0.181	0.029	Small	0.565	Moderate	
RL	→	DI	0.249	0.062	Small	0.565	Moderate	

The association between the two first order constructs strengthens somewhat when partially mediated by knowledge and perceived value and the significant, direct relationship is retained. However, the relationship is still weak meaning that customer data and the business network are not fully exploited through digital marketing technology and are not being used to create insight.

In summary, the fact that the relationship between opportunity creation and the AUDT constructs was not found to be significant in the analysis model in addition to the weakness of the other significant relationships in this study provides a view that digital marketing technology is not being used to generate customer data for insight.

7.6 Risk management and the adoption and use of digital marketing technology

In this study, risk management is considered from a perspective of using digital marketing technology that is new to the business, not necessarily as an innovation in digital marketing technology itself. The construct of risk management also explores the owner-managers attitude towards digital marketing activities associated with risk – whether they are cautious and hold off until the benefits are proven; whether they are prepared to 'give it a go' or whether they are considered in their approach to adoption through evaluation and the subsequent decision that is made (Chaffey 2011). The STB owner-manager will decide the financial and reputational risks that are involved in the business and decide how to avoid or deal with them. These decisions will be based upon their own experience, and advice and intelligence from trusted sources such as the business network. There is a consideration therefore, that new networks take time and effort to build and establish trust before the STB owner-manager uses them to potentially provide an advantage.

Knowledge of digital marketing technology was not significant as a mediator between risk management and the constructs of AUDT. The direct association between perceived value of marketing technology and risk management is relatively weak statistically (perceived value path coefficient 0.233). The direct relationship between risk management and investment was not significant in Model 1 and was not mediated by knowledge or perceived value of digital marketing technology in Model 2. Risk is not a factor when it comes to investment in digital marketing technology implying that any time or money invested is without risk or that the benefits are proven before investment takes place, in line with the findings of Simmons et al. (2008; 2011) and Chaffey (2011). However, as

knowledge of digital marketing technology is not a mediator and does not explain the relationship, there is a further possibility that it happens as a matter of course and it is not considered an investment for the business. The significance of the relationship between customer data storage and integration and data insight is partially explained through mediation in Model 2.

The following sub-sections discuss the influence of risk management on the use of three AUDT constructs – 7.6.1 risk management and digital marketing applications; 7.6.2 risk management and customer data storage and integration; and, 7.6.3 data insight.

7.6.1 Risk management (RI) and digital marketing applications (APPS)

The results of this study find that there is a positive direct relationship between risk management and the adoption and use of digital marketing applications (Table 7.16). However, the association between the two constructs is weak; the relevance of risk management explaining the use of digital marketing applications is small and there is little change in their use in the STB as the relevance of risk increases.

Table 7.16: Model 1 Direct relationship effects between risk management and the adoption and use of digital marketing applications

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
RI	→	APPS	0.308	0.091	Small	0.312	Moderate/weak

As the direct relationship between these two constructs is weak, some understanding of the reason for this may be gained by considering the findings in Model 2 that neither knowledge nor perceived value of marketing technology mediates (or explains) the relationship. The causal effect of risk on the use of digital channels is only slight, indicating there is an understanding of the risk involved and that risk is acceptable for the digital marketing applications that are used. In other words, the digital application channel is free or has little cost (so there are no financial implications of loss) and/or it is easy to maintain and use, or the way that digital marketing applications are used carries little or no risk to the STB.

Advertising the STB services using digital paid channels can be undertaken on a pay per click basis so the risk is minimal, and parameters may be set in advance so that budgets are not exceeded. Using digital marketing technology enables relatively inexpensive testing to ensure that marketing campaigns provide the maximum benefit. Finally, digital analysis applications may come free of charge with limited analytic functionality as an introduction - the idea being that as the levels of understanding increase, the more insight can be generated and the value of analytics increases and charges to use them increase accordingly.

Another mitigation of risk with digital marketing technology is the flexibility that digital marketing technology enables; online content may be changed relatively easily if the channels are managed within the business by using basic digital marketing applications or social media accounts. On the other hand, there are possible time and financial limitations with digital marketing applications that are outsourced to an agency and the owner-manager is not directly in control.

The choice behind the amount of digital marketing applications as channels of communication, paid for advertising and analysis are many and well established so the STB owner-manager may be satisfied with the benefits they offer with minimal risk. Many digital channels are universally used and accepted by both businesses and their customers (for example websites and social media accounts). Consequently, they become an obvious decision for the business owner to adopt. As already discussed, the lack of resources (money, knowledge and skills) may limit innovation and therefore risk as small businesses tend to follow innovation only after they have assured themselves that the investments or changes are feasible (Hjalager 2002), but this comes at a cost of growth to the business, locality and industry.

7.6.2 Risk management (RI) and customer data storage and integration (DSI)

The direct relationship between risk management and customer data storage and integration has the weakest of all the direct associations (Table 7.17).

Table 7.17: Model 1 Direct relationship effects between risk management and customer data storage and integration

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		Endogenous	Coefficient	f^2 Effect		R^2 Effect	
RI	→	DSI	0.172	0.031	Small	0.377	Moderate/weak

There is little influence from risk management explaining the use of digital marketing technology in the STB, and there is little change in the use of customer data storage and integration in the STB as the relevance of risk increases suggesting that maintaining the status quo with existing, familiar practices is preferred.

When considering data storage within the STB, the decision facing the owner-managers is not as straightforward as using some digital marketing applications that are easily adopted without any potential significant consequences – in other words the type of technology (Schepers and Wetzels 2007) and the level of risk associated with using it (Venkatesh and Goyal 2010). For small businesses, there is little risk associated with using digital marketing applications such as social media as the provider hosts the service and stores any data that is generated. Privacy settings can be set up in advance and the provider analyses the data for their own purposes as well as those of their paying customers, if required.

Customer data storage is not a short-term process for a business, it requires planning, and potentially substantial investment of money, time, or both, and with investment comes risk. Firstly, the business owner must decide what data to store (therefore it must be generated), where to store it; when to store it; and finally, from a strategic marketing perspective why and how to store it. If customer data storage is outsourced i.e. using cloud technology, raises the question of who will manage the storage and where the customer data is securely stored. It is known that the majority of small businesses are not making use of cloud technology for storage purposes (European Tourism Forum 2016), and concerns regarding information security have also increased (Ho et al. 2017). Risk management is not driving the use of digital marketing technology for customer data storage and integration, indicating the sample are risk averse when it comes to handling customer data.

When looking at the results for adopting and using digital marketing technology for customer data storage and integration it is useful to consider the theories that have been posited around technology adoption. In particular, the technology acceptance model (Davis 1989) and theory of planned behaviour (Ajzen 1991). In the technology acceptance model (Davis 1989) perceived usefulness and perceived ease of use are the two factors identified as particularly important in the decision making process to adopt technology. The mediation results in this study illustrate that the perceived value of storing data partially explains the small causal effect between risk management and customer data storage and integration, and the direct causal relationship remains in Model 2. If the owner-manager does not understand that the value in customer data comes from storing, integrating and using it, they will not invest in customer data storage systems and thus avoid the risk.

Perceived ease of use is another possible reason for the low correlation between risk and customer data storage and integration. Maintaining customer databases and combining different data sources requires expertise, skills and understanding – yet again, the risk of outsourcing customer data storage may be mitigated by using qualified and experienced suppliers but as an expense to the business.

Data security is another important consideration and a tangible threat when storing customer information. Businesses in the UK are governed by the General Data Protection Regulations (Data Protection Act 2018). As a result small businesses may make the conscious decision not to adopt customer data storage and integration technology because of the risks involved with keeping personal customer data, ensuring that it securely stored and that it is only used for the purpose for which it was collected.

The mediating effects of the ADT constructs of knowledge and perceived value of digital marketing technology on the relationship between risk management approach and customer data storage and integration are now discussed with the results shown in Table 7.18.

Table 7.18: Model 2 Indirect mediating relationship effects between risk management and customer data storage and integration (partially mediated by perceived value of digital marketing technology)

PV
↗ ↘
RI → DSI

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
RI	→	PV	0.233	0.072	Small	0.563	Moderate
PV	→	DSI	**0.302**	0.066	Small	0.400	Moderate/weak
RI	→	DSI	0.169	0.025	Small	0.400	Moderate/weak

Knowledge of digital marketing technology neither fully nor partially mediate the relationship between risk management and customer data storage and integration; it is not a factor in this part of the study. This aspect of digital marketing technology adoption is the most specialist in terms of the skill set required to use databases and manage customer data feeds. Perceived value of digital marketing technology is a partial mediator of the relationship between risk management and customer data storage and integration, again intimating that the STB owner-managers understand the value of digital customer data but it is not significant enough for them to risk managing its storage and integration into a customer database.

7.6.3 Risk management (RI) and data insight (DI)

The analysis results of the relationship between risk management and data insight are slightly stronger than the relationship with customer data storage and integration, see Table 7.19.

Table 7.19: Model 1 Direct relationship effects between risk management and data insight

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		**Endogenous**	**Coefficient**	***f²* Effect**		***R²* Effect**	
RI	→	DI	0.241	0.071	Small	0.541	Moderate

The relevance of the risk management approach by the STB owner-manager in explaining the use of digital marketing technology for data insight is negligible but there is more variance in its use than with customer data storage and integration as the relevance of risk increases.

The mediating effect of the ADT constructs knowledge and perceived value of digital marketing technology on the relationship between risk management approach and digital data insight are discussed next, and analysis results presented in Table 7.20.

Table 7.20: Model 2 Indirect mediating relationship effects between risk management and data insight (partially mediated by perceived value of digital marketing technology)

PV
↗ ↘
RI → DI

Directional Relationship			Relationship	Strength of Relationship			
Exogenous		**Endogenous**	**Coefficient**	**f^2 Effect**		**R^2 Effect**	
RI	→	PV	0.233	0.072	Small	0.563	Moderate
PV	→	DI	0.181	0.029	Small	0.565	Moderate
RI	→	DI	0.201	0.050	Small	0.565	Moderate

The perceived value of digital marketing technology partially mediates or explains the significant direct relationship between risk management and data insight and the direct positive relationship is retained in Model 2. Therefore, owner-managers do not perceive the value of using digital marketing technology for data insight is worth the risk. This may be because they are aware of the risks associated with analysing and using customer data and, therefore do not engage with such functionality, or equally, they simply do not consider adopting digital marketing technology for insight into their customers (therefore there is no risk) as they obtain market intelligence using other means.

The extended technology acceptance model may provide some insight regarding the weak association between risk and data insight (Venkatesh et al. 2003). The performance and effort expectancy required on behalf of the STB owner-manager when it comes to analysing customer data may be considered too great as skills are required to interpret the data once the systems have been put in place to facilitate the analysis. As previously discussed, most STBs have rudimentary customer data and systems (Ateljevic 2007) and the expertise to analyse customer data for insight will be beyond the skills of most owner-managers and not necessarily worth the risk. Similarly, if the owner-manager does not believe the adoption will lead to probable success and is more likely to result in failure in their expectations, in other words, their scepticism, they will avoid adoption (Ajzen 1985, 1991).

The weak association for data insight may also be linked to the weaker association with customer data storage and integration – a business needs to generate data that is kept in a suitable format for it to be analysed and subsequent marketing decisions made as a result. If the owner-manager is open to the idea of gaining insight from the analysis of customer data, they may choose to outsource it to a specialist agency. Here, trust may come into play – for example reliance that an agency will do what it says it will do and feeling secure when relying on an outside party, often based on gut feeling and faith (Ajzen 1991), which is a little tenuous when it comes to data science. There is also the complicating factor of perceived control of the owner-manager relinquishing responsibility for a significant and critical element of their service business to a third party (Mathieson 1991).

Whilst the owner-manager may not have the skill set to manage and analyse customer data themselves, they still require a level of knowledge in order to understand the principles of data analysis. This can be related to effort expectancy on behalf of the STB owner-manager (portrayed in the TAM2 Venkatesh et al. 2003), who already has time and financial pressures, so they chose to only adopt certain technologies that carry very little risk and effort on their part.

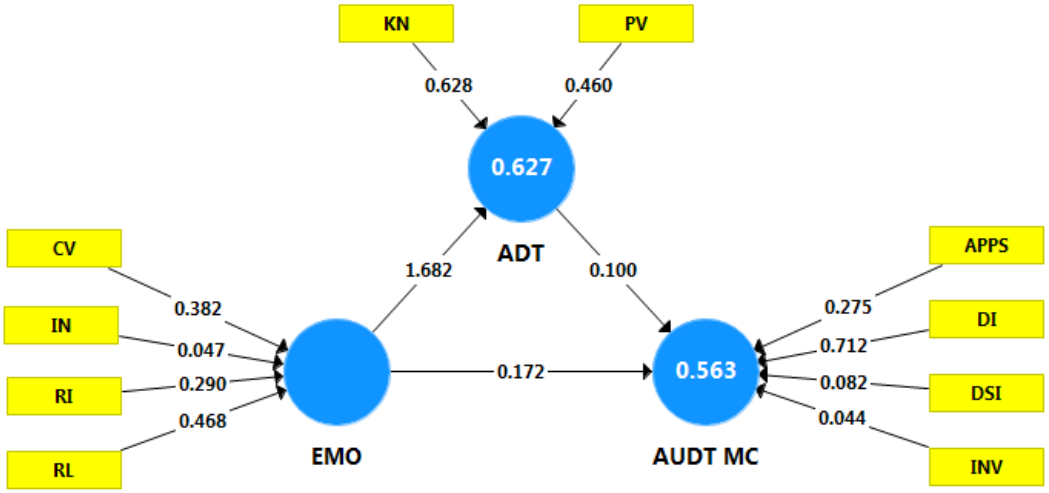
Risk management by the STB owner-manager may be impacted by knowledge. In this research, knowledge of digital marketing technology plays no statistical part in the relationship between managing risk and the constructs of AUDT. A lack of confidence has been identified as a barrier to digital marketing technology adoption (Wolcott et al. 2008) and this may be addressed through policy makers providing a platform to learn and acquire knowledge in order that STB owner-managers engage and use digital customer data for marketing decisions.

Next, the findings from the second order analysis in Model 3 are discussed.

7.7 The relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology, mediated by attitude towards digital marketing technology

The final analysis model, Model 3, measured the contribution of the first order constructs as formative indicators of an entrepreneurial marketing orientation (EMO); attitude towards digital marketing technology (ADT); and the adoption and use of digital marketing technology (AUDT) constructs in SmartPLS (Figure 7.1). It also examined the mediating effect of the STB owner-manager's ADT between an EMO and AUDT.

Figure 7.1: EMO ADT and AUDT Model (with outer weights, f^2 effect size, and R^2 values)



Opportunity focus and proactivity represented by opportunity creation were removed as indicators as they were not statistically significant, the remaining formative indicators were customer value, innovation focus, resource leveraging and risk management. Knowledge and perceived value of digital marketing technology are the two measurement items representing ADT and finally AUDT is represented by digital marketing applications, digital marketing technology investment, customer data storage and integration, and data insight. As a construct for AUDT, data insight was created from customer data analysis and decision making and brings together the other constructs by linking the use of digital marketing applications to generate customer data, investment to integrate possible multiple digital data sources as well as the analysis tools to generate insight and the

resultant decision making and planning. The indicators have formative relationships with the constructs as they are considered separate elements that make up the three constructs of EMO, ADT and AUDT within the model and have low correlation.

An innovation focus as a formative indicator contributing to an EMO is weak but is retained (see chapter 6 section 6.10.4). Innovativeness is very much a part of an entrepreneurial orientation along with opportunity focus and proactivity, so its weakness is unsurprising in the final part of analysis, given the findings at the first order construct level. The main characteristics of the STB owner-managers EMO in this study that influence the adoption and use of digital marketing technology are resource leveraging, customer value and to a lesser extent risk management.

Knowledge and perceived value of digital marketing technology are both strong representations of attitude towards digital marketing technology and are significant factors in the adoption and use of digital marketing technology.

Data insight is the strongest of all of the indicators in the model so these business owners recognise knowing the customer is a key part of the service and that adopting and using digital marketing technology can provide them with that knowledge. Digital marketing technology investment and customer data storage and integration are weak indicators of digital marketing technology adoption and use, indicating that they are limited within the business. The model at the higher, second order level, shows statistically stronger relationships between all three constructs. The strength of influence of an EMO on AUDT mediated by ADT is measured in PLS-SEM by the effect size and the results are given in Table 7.21.

Table 7. 21: Model 1 Direct relationship effects between EMO, ADT and AUDT

Directional Relationship			**Relationship**	**Strength of Relationship**			
Exogenous		**Endogenous**	**Coefficient**	**f^2 Effect**		**R^2 Effect**	
EMO	→	ADT	0.792	1.682	Large	0.627	Moderate
EMO	→	AUDT	0.449	0.172	Medium	0.563	Moderate
ADT	→	AUDT	0.342	1.000	Large	0.563	Moderate

The results from Model 3 are that there is a positive direct relationship between an entrepreneurial marketing orientation and the adoption and use of digital marketing technology and the relationship is strengthened when taking into account the attitude towards digital marketing technology of the STB owner-manager (the value increases from 0.449 to 0.720 - Table 6.29).

There is a significant effect of an entrepreneurial marketing orientation on the STB owner-manager's attitude towards digital marketing technology and this study has found that attitude has a considerable impact on the adoption and use of digital marketing technology. The direct effect of an entrepreneurial marketing orientation on digital marketing technology adoption and use is reduced but still significant. The study has also found that if a STB owner-manager takes a more entrepreneurial approach to marketing the adoption and use of digital marketing technology will increase. The direct relationship between an entrepreneurial marketing orientation and adopting and using digital marketing technology is strengthened when attitude towards digital marketing technology is considered – the path coefficient (the association) between the two increases from 0.449 to 0.720 and is stronger.

7.8 Conclusion

In conclusion, this study has found that certain characteristics of an entrepreneurial marketing orientation of the small tourism owner-manager have an influence on some elements that represent the adoption and use of digital marketing technology. An EMO is highly relevant when explaining AUDT and if an EMO is encouraged in the STB owner-manager, AUDT will increase. The influence remains and is strengthened when the STB owner-manager's attitude towards digital marketing technology mediates the relationship, therefore attitude is also relevant. A key finding is that STB owner-managers have limited knowledge and understanding of the opportunities for innovative marketing processes that digital marketing technology may provide for their business. Confidence may be assured regarding Model 3 due to the vigorous analysis of the elements that constitute the three constructs at the first order level.

CHAPTER 8

CONCLUSION

8.1 Introduction

The case for small tourism businesses (STBs) to adopt and use digital marketing technology to improve their marketing effectiveness is well documented in the small business and tourism literature (for example, Martin and Matlay 2003; Aldebert et al. 2011; Peltier et al. 2012; Thompson et al. 2013). In addition, the digital marketing technology landscape has dramatically evolved with exponential growth in marketing tools and applications, leaving the STB with an overwhelming choice to enhance their digital marketing. However, the same literature also identifies the challenges that STBs face in term of the barriers to adoption and use of digital marketing technology (Jones at al. 2003; Chaffey and Patron 2012; Hameed et al. 2012; Peltier et al. 2012; Alford and Jones 2020).

The STB is overly reliant on powerful online intermediaries (for example Booking.com™) and requires some level of assistance to navigate the technological landscape in the form of an appropriate marketing-led framework for digital marketing technology adoption to replace traditional marketing methods. Whilst there are a number of published technology adoption frameworks (e.g. Nguyen et al. 2015) there is an absence of frameworks in the literature that include a marketing approach that is relevant to the STB.

With this as a context, the main purpose of this study was to examine the level of influence of an entrepreneurial marketing orientation (EMO) of an owner-manager on the adoption and use of digital marketing technology (AUDT) in STBs. This study took account of the attitudes of the owner-manager towards digital marketing technology (ADT). The reasons for this focus was that the link between an EMO and AUDT had not been fully established. There is limited research on innovative, digital marketing practices in tourism (Thomas and Wood 2014) and the influence of using digital marketing technology enabling innovation requires further investigation (Hjalager 2010). In addition, there is limited understanding of how

the entrepreneurial nature of STB owner-managers and their ADT might drive the AUDT. This includes the use of customer data generated by digital technology to drive marketing innovation in STBs, which is considered inadequate (Aldebert et al. 2011; Williams and Shaw 2011).

This chapter reviews the key conclusions and implications of the research. The chapter covers the aims, objectives of the study (Section 8.2), the resultant implications (Section 8.3), the limitations and future research recommendations (Section 8.4), and concluding remarks (Section 8.5).

8.2 Research aims and objectives

The overarching aim of this study is: -

> to provide empirical evidence on whether, and to what extent, the entrepreneurial marketing orientation and attitude towards digital marketing technology of the STB owner-manager influences the adoption and use of digital marketing technology

The aim of the research was met through each of the four specific objectives underpinning the study: -

1. to critically evaluate the relevant small business marketing, digital technology literature and the underpinnings of EM theory to identify the gaps in knowledge in relation to the challenges and lack of STB adoption and use of digital marketing technology to guide the setting of the research questions and hypotheses

The literature review revealed the continuing lack of marketing-led technology adoption models in tourism research. It also failed to address the question as to whether an entrepreneurial marketing orientation influences the adoption and use of digital marketing technology in STBs, and if so, the extent to which it does. The limited insight into marketing innovation and the use of digital marketing

technology in STBs have led to calls for further investigation (Thomas et al. 2014). This study has addressed this requirement, identified in the small business literature, by contributing to the understanding of the reasons for and against the adoption and use of digital marketing technology and for a more integrated multi-disciplinary research approach. This study investigates the relationship between an EMO and the use of digital marketing technology within a small tourism business context for the first time.

An EMO was chosen as the focus for adopting digital marketing technology due to its fit with the marketing style of some small businesses and its association with the opportunities that digital marketing technology provides. The research identified the EM dimensions that were likely to influence the adoption and use of digital marketing technology through a review of the characteristics of an EMO, technology adoption models and the respective behavioural and attitudinal traits towards digital marketing technology (ADT). In addition, a review of the small business literature was carried out to identify the variables relating to the adoption and use of digital marketing technology (the use of digital communication, analysis and advertising applications; investment in digital marketing technology; customer data storage and integration; digital customer data analysis; and marketing decision making). The identification of the variables led to the second objective.

2. to develop a conceptual framework to specify the variables in relation to the characteristics of an entrepreneurial marketing orientation and attitude towards digital marketing technology of the STB owner-manager, and the adoption and use of digital marketing technology and to derive, validate and refine a measurement scale for each of the EMO and AUDT variables

By considering small businesses marketing and the marketing practices of entrepreneurs, an alternative marketing-led conceptual framework was developed for the study. The conceptual framework provides a guide to explore the influences on digital marketing technology adoption and usage in STBs. The process that led to the conceptualisation of the marketing-led framework identified the concepts as constructs (or latent, unobserved variables) and their indicators for measurement

purposes in this quantitative research study. The complex concepts of EMO, ADT and AUDT were made up of multiple characteristics and were derived from a number of dimensions and therefore, were described at a holistic, higher construct level (second order) and at a detailed, lower construct level (first order) for multivariate analysis. The conceptual framework included 16 variables or constructs representing EMO, ADT and AUDT (see Figure 4.2 page 93).

The majority of research at the EM interface has been qualitative and there are very few published measurement scales to make reference to (Morrish et al. 2020). When measuring EMO, ADT and AUDT as concepts, there are challenges of avoiding assumptions and interpretation. According to Nunnally and Bernstein (1994), it is not possible to test the adequacy of a construct measurement without a clearly specified domain and the implications on their indicators and measurement model specification (McKenzie et al. 2011). Failure to adequately specify the conceptual meaning of the focal construct triggers a series of events that undermines construct validity (primarily due to measure deficiency) and the validity of any statistical conclusions due to the bias effects of measurement model misspecification (MacKenzie et al. 2011). Due diligence followed in defining the constructs to ensure the measurement indicators truly represented the concepts being measured and confirmed the difficulty of accurate, quantitative, measurement of unobservable variables for robust analysis.

Empirical data was gathered using an online survey based upon the conceptual framework containing both the three second order constructs of EMO, ADT and AUDT and their representative first order constructs. Measurement items for the 16 first order constructs were analysed using PLS-SEM to ascertain their relevance in explaining the construct and some were removed. This process also resulted in merging a number of the first order constructs from 16 to 11 (Figure 6.8, p.181). However, the retention of over half of the indicators for both the EMO and AUDT first order constructs confirms that the study provides a substantive foundation for further work on a measurement scale for both domains. The remaining measurement items provided the basis on which to explore the direct and indirect (mediating) relationships between the first order constructs and; any constructs that were not statistically significant were removed from the analysis model. The

second order constructs were also statistically analysed at the second order level and each relationship was statistically stronger. The analysis and findings detailed in chapter 6 were discussed in chapter 7.

The trade-off between the number of measurement items (represented by statements in the online questionnaire survey) and accurate construct measurement is a concern regarding response rate. The STB owner-manager can be short of free time and experience research fatigue, therefore the length of the questionnaire survey and completion time was a significant consideration. This study proposed and validated an EMO measurement scale as well as a new measurement scale for digital marketing technology and its use by STBs. Despite a detailed examination of the construct definitions (Section 5.4) and the aim to avoid any overlap of measurement items, the analysis resulted in the removal of a number of measurement indicators due to their cross loading on other constructs. Therefore, it is recognised that further work is required to refine the measurement of the EMO and AUDT constructs. However, the measurement scale enabled the following third objective to be met: -

3. to identify the statistically significant relationships between the EMO, ADT and AUDT in order to estimate the influence of an EMO on the AUDT in STBs (at a first and second order level) with empirical evidence through original data collection from a sample of STBs and through robust analysis

It became evident early on in the statistical analysis and the development of the analysis model in this study, that a documented, methodical approach was required in order to achieve this objective. Rigorous applications with better results had led to higher acceptance of the reported PLS-SEM method using SmartPLS (Hair et al. 2013) for the analysis. An alternative software programme was tested (Warp PLS) initially to compare findings and similar results were achieved, however SmartPLS was chosen due to the reliability and validity standards it required.

Statistical evidence was found between the positive associations of some EMO constructs and AUDT. However, the findings at the first order level did not lead to

a particularly robust argument due to the weak statistical associations. The marketing characteristic of a customer value orientation had the strongest statistical positive association and the entrepreneurial characteristics of a risk management, innovation focus and opportunity creation were statistically weak, negative or had no relevance respectively. As well as the weak direct associations, conclusions may be inferred from the lack of a statistically significant association between opportunity creation and AUDT and a negative association with an innovation focus when considering the final objective of mediation.

4. to examine the mediating effect of the owner-manager's attitude towards digital marketing technology on the relationship between an EMO and AUDT in STBs (at a first and second order level)

With the addition of knowledge and perceived value of digital marketing technology variables as mediators between the direct relationships, customer value was the only construct that had a positive association with all the AUDT constructs. Through mediation analysis, knowledge and perceived value of digital marketing technology explained the association and the strength of the relationships with the AUDT constructs. There were four weak associations between the EMO and AUDT first order constructs that were fully explained by knowledge of digital marketing technology (a customer value and resource leveraging orientation and their associations with the use of digital marketing applications and digital marketing investment) and two that are partially explained (a customer value and resource leveraging orientation and data insight). Perceived value of digital marketing technology partially explains the remaining eight statistically significant relationships between customer data storage and integration and data insight and a customer value orientation, innovation focus, risk management and a resource leveraging orientation). Perceived value of digital marketing technology had no statistical associations with the adoption and use of digital marketing technology applications and digital marketing investment.

The relationships between the constructs were strengthened at the second order level where the large number of variables were reduced to a composite set in order to satisfy the research aim to consider EMO, ADT and AUDT as holistic concepts

once the relevant factors were identified. Searching for patterns in the data analysis without any prior knowledge of the relationships between the variables resulted in a study that was exploratory in its nature and the findings are open to interpretation and result in a nuanced argument.

8.3 Implications for theory, knowledge and practice

8.3.1 Academic contribution

There is a requirement to theoretically develop marketing to reflect changes in the marketing environment, current practice and to guide the future of the discipline (Thomas et al. 2011) for example, the fundamental changes in the way marketers engage with customers, the impact of the network, and how to deal with emergent digital technology. This research provides an important contribution to the understanding of digital marketing technology adoption and use in STBs through a conceptual framework that included three concepts for examination – EMO, ADT and AUDT, thus advancing conceptual knowledge and bringing in interdisciplinary knowledge (Kumar 2015).

The research has established, for the first time, the link between an EMO and the AUDT at a first and second order level, and also examined the marketing orientation influence of the STB owner-manager – a further contribution to the field of STB marketing. Consequently, the conceptual framework provides an important contribution to our understanding of the adoption and use of digital marketing technology by identifying and linking the specific individual characteristics of the STB owner-manager that are influential. A contribution to understanding the adoption of digital marketing technology in STBs has been made by taking adoption theory further to incorporate measures of the usage of customer data storage and integration and customer data insight, as well as digital marketing applications and investment.

In the development of a measurement scale for EM, a theoretical contribution has been made by proposing a reduced number of orientation characteristics from those proposed by Morris et al. (2002) and one more than that proposed by Jones et al.

(2013b) as a result of measuring construct validity and reliability. The five EMO characteristics proposed are (1) a focus on customer value (merging customer intensity and value creation), (2) an innovation focus, (3) opportunity creation (merging opportunity focus and proactivity), (4) risk management and (5) leveraging resources.

8.3.2 Knowledge contribution

Whilst the findings in this study have illustrated the weakness of all of the associations between the EMO and AUDT constructs, the characteristics of an entrepreneurial orientation (having a focus on opportunity creation, innovation, proactivity, resource leveraging and risk management) are the weakest or not significant at all. The negative association of an innovation focus corroborates the opinions of Thompson et al. (2013) that being innovative is risky and for that reason, risk averse owner-managers may consider digital marketing innovations as having less importance. Consequently, they are more likely to be less innovative in their use of digital marketing technology, and therefore, invest in it less. An entrepreneurial approach to marketing is not enough to significantly influence the adoption and use of digital marketing technology in STBs and a lack of knowledge and the perceived value of digital marketing technology helps to explain why. Therefore, there are still some questions to be answered regarding the on-going low levels of the STB's adoption and use of digital marketing technology.

The STB owner-manager is engaging with digital marketing technology by meeting the minimum requirements of their digitally engaged customers but they are not going beyond that and using marketing technology for innovation and opportunity creation to grow the business. Therefore, it cannot be clear to the owner-manager how further engaging in digital marketing technology will improve the performance of the business and advance it. STB owner-managers see the value of digital marketing technology and recognise the value of the customer to their business but they are not creating a digital relationship with the customer through online channel dialogue. The STB owner-manager acknowledges the possibilities that digital marketing technology offers but that recognition is not enough to significantly change their adoptive behaviour and use. It is important that the

businesses continue to ensure they meet customer expectations during the service experience and potentially rely on their digital, empowered customers to do the rest through word of mouth or word of mouse.

The lack of digital marketing skills and the cost and availability of external expertise are posited as barriers to adoption (Simmons et al. 2008; Simmons et al. 2011). The participants in this study indicated that learning (a new skill set) should not be an issue as almost 80% of the sample have a higher education qualification. Whilst the sample size is small, the lack of digital skills, cannot entirely be attributed to the lifestyle tourism owner, but may reflect the argument that STB marketing is about running a day-to-day operation and is conceptually separate to Hills and Hultman's (2011) view that entrepreneurial marketing drives growth. If the lack of adoption and use of digital marketing technology is not just about skills and resources, then it is a case of the STB owner-manager keeping up with marketing technology and not going beyond it. By using digital intermediaries such as Booking.com™ then STBs have an easier option for their business needs, but they pay the market price for those services.

The STB owner-manager tends to be reactive rather than proactive (Gilmore 2001), consequently, digital marketing technology is used but not to any great level of engagement and, as a consequence, the STB owner-manager's digital marketing approach cannot be described as particularly entrepreneurial in orientation. Communication channels may have changed to digital ones in STBs but these businesses may not have seen any significant increase in customers or turnover, and that may well reflect how they use these channels. There are difficulties for the small businesses in attributing the value of digital marketing technology to their business, which explains the difficulty in making any associations through research. Yet, despite these difficulties, the small business literature persists in stressing the relevance of adopting and using digital marketing technology for improved performance and the barriers are often attributed to skills sets and financial resources (Simmons et al. 2011; Jones and Suoranta 2013).

8.3.3 Practical contribution

On the face of the argument, the increasing use of digital marketing technology by tourism customers has encouraged the adoption and use of digital communication channels by some STBs to market their businesses (by their use of social media, websites and email). However, as previously discussed, digital marketing technology provides information that can generate insight and business innovation just by practicing marketing in a different way. Alternatively, digital marketing technology may be used at a superficial level with the STB delivering marketing messages via digital channels as opposed to traditional methods and not engaging with the opportunities that digital marketing provides. As the statistical findings from this study only show weak influences on the AUDT, the issue can be formally raised regarding the STB owner-manager's imperative to further adopt and use digital marketing technology.

By adapting to the tourism customer's use of digital technology, the STB may use digital marketing technology and leverage customer data for insight to improve performance (de Swaan Arons et al. 2014). There is a need therefore, to inform the STB owner-manager how to use the marketing technology and develop their knowledge to realise the opportunities for their business. Knowledge and perceptions will influence the action of adoption and use of digital marketing technology by the STB owner-manager according to the CAC model (see Table 2.3, p.40). Therefore, as part of attitude, policy makers may consider how they can improve knowledge levels of digital marketing technology within the micro and STB through better access to education and training (Foroudi et al. 2017). Digital marketing is not conceived as a necessary expense but as an investment, and is emerging as an integral part of all aspects of the business in order to engender success (Kumar 2015; Gilmore et al. 2013). By training and educating STB owner-manager in digital marketing technology, a more positive attitude can develop and as a consequence, deeper levels of engagement, investment and growth (Foroudi et al. 2017).

Any government policies will require the ability to offer immediate benefits to digital marketing technology adoption and on-going support services for

implementation (Mazzarol 2015). The continuation of tailor made policy initiatives and actions that support STB awareness of new, relevant digital marketing technologies should be clearly structured around different management practices in relation to different business needs to ensure that solutions are appropriate and implementation benefits clear to encourage adoption (Dredge et al. 2018; Department Business, Industry and Strategy 2019a). This study has identified an emphasis is required to focus on the opportunities that digital marketing technology may provide the STB.

Policy makers should support local agencies as they are best placed to understand the local and regional challenges of STBs and thus avoid adopting 'one-size fits all' solutions from other destinations (Dredge et al. 2018). Local agencies have the ability to design cost effective tools with packages based on what the STB actually uses and could focus on personalised outcome benefits for the STB owner-manager (Ritz et al 2019).

8.4 Limitations and future research recommendations

8.4.1 Research limitations

There are a number of limitations associated with this study as with most empirical research. Firstly, the sample size was relatively small and only included business in England that were recruited through the DMO, and some bias may have occurred through non-responders to the communication from the DMO and through small tourism businesses that were not affiliated to a DMO. The sample size of 157 met published guidelines for structural equation modelling (Loehlin 1992; Hoyle 1995; Schumacher and Lomax 2004; Kline 2005; Hair et al. 2014) and was close to the minimum number of cases per observed variables (Kline 2005). However, a sample size of over 200 would meet further published criteria (Loehlin 1992; Hoyle 1995; Kline 2005; Hair et al. 2014; Stevens 2002; Garson 2014) with stronger statistical power. Secondly, replication of this study would be of interest to provide a UK wide sample by including proportionate numbers from Scotland, Wales and Northern Ireland to identify how different regional policy makers assist the STB and digital marketing technology adoption and use. Finally, the

quantitative approach to the analysis and the number of variables led to multivariate and specific mediation analysis of the indirect relationships between the EMO and AUDT constructs. Related to mediation is moderation where an independent variable changes the strength or direction of a relationship between two constructs. The categorical moderating effect of the STB characteristics such as turnover, type of business, or age and years of experience of the STB owner-manager may be analysed to learn about any significant differences between subsamples within the group of respondents.

8.4.2 Future research recommendations

In this study's analysis, a number of the measurement items were discarded as a result of their cross loading (demonstrating the correlation of a measurement item with other constructs within the analysis model) on a different construct to the one they were intended to measure. Discarding measurement items highlighted the need to continue to refine the measurement of the first order constructs of an EMO and the AUDT. Another consideration for future research occurred through merging the EMO first order constructs of opportunity focus and proactivity in the modelling process and subsequent analysis. The measurement items for the opportunity creation construct were reduced to one for opportunity focus and four for proactivity. Consequently, additional research is recommended to test the performance of measurement items for both the opportunity focus and proactivity constructs of an EMO. Additional investigation may also provide an explanation for the varying strength of relationships between the EMO, ADT and AUDT constructs within the first and second order models.

An investigation into the entrepreneurial marketing traits of a learning orientation by the STB owner-manager and in particular, the desire to learn digital marketing skills could identify their barriers to adoption and highlight areas where support may be provided. The value the STB owner-manager places on customer data will help to answer the questions relating to their need to adopt, and their marketing style that will encourage digital marketing technology adoption and use.

The co-creation of value with the customer through digital marketing applications requires further investigation as there is evidence that the STB owner-manager associates them with customer value but they are not used to create value and the reasons for this need to be understood. Further enquiry is recommended to identify whether there are different levels of association between the three different types of digital marketing applications that this study combined as a group and to identify the barriers to optimising their use. By researching how knowledge of digital marketing technology can be used to create customer value through different digital marketing applications that the STB has adopted may lead to deeper levels of engagement. Carrying out longitudinal studies in STBs where disparate customer data sources are systematically integrated would provide case studies to further the understanding of the difficulties these businesses face when it comes to integrating customer data for improved customer value.

Rogers (2003) linked knowledge with the adoption of an innovation and subsequent research on how to develop knowledge and awareness of digital marketing technology in STB owner-managers may reverse the negative association with an innovation focus. Further, detailed research to investigate the reasons behind the negative association with an innovation focus and the AUDT by STB owner-managers is required, in particular to its connection with the growth goals of the STB. Digital marketing technology may be tested to see how it could enhance the existing sources of knowledge and creativity in the STB, and case studies used to demonstrate the nature of digital marketing technology for incremental innovation.

Further enquiry could also investigate how the STB owner-manager perceives digital customer data and the reasons why the STBs are not using customer data as a resource and source of insight. For example, digital customer data in STBs may simply be considered as a collection of facts that either overwhelms the business owner-manager because of its volume, or that it has no value as they do not have the expertise or digital tools to extract the insight.

Further research is recommended to be carried out on the influences of the business network and the risk of digital marketing technology adoption and use by the STB

owner-manager and in particular, how they develop trust in digital marketing technology. In addition, by investigating the types of digital marketing applications that the STB owner-manager considers more of a risk to the business could highlight the specific reasons to be addressed and mitigate the risk. Finally, further investigation on the supportive role that policy makers may play in order to help the digital transformation of STBs is required particularly in identifying which digital marketing technologies to adopt and in measuring the return on digital marketing investment.

8.5 Concluding remarks

The starting point for this research was the fact that STBs, and small businesses in general, are not using digital marketing technology to take full advantage of the benefits it can provide (European Tourism Forum 2016; Department for Business, Energy and Industrial Strategy 2019a). According to the marketing and small business literature, STB owner-managers have a propensity to engage in EM (orientation) and there is a theoretical fit between EM and digital marketing technology (Quinton and Harridge-March 2006; Harrigan et al. 2012a; Jones et al. 2014). The literature states that small businesses will perform well if they engage with digital marketing (Martin and Matlay 2003; Aldebert et al. 2011; Peltier et al. 2012; Thompson et al. 2013) however, in reality there is a mismatch between the theory and actual practice.

Despite the majority of tourism and hospitality customers researching and planning their leisure time online (ABTA 2018), the lack of digital marketing technology adoption and use persists in STBs. The lack of adoption is not without implication or consequence ranging from inefficiency and underutilised resources, limited productivity and employment, and missed opportunities leading to limited growth and limited customer value for businesses, industries and economic regions (Strategic Policy Forum on Digital Entrepreneurship 2015). It is important to emerge from the cycle of STB owner-managers not understanding digital marketing technology and as a result, not investing in it and therefore, missing out on the opportunities to create value for the tourism customer and their business.

The results of this research are that some EMO characteristics are statistically significant in influencing digital marketing technology adoption and use, but the statistical significance is weak. There is an opportunity to go beyond simple, superficial adoption and use of digital marketing technology and future research must identify the value of digital marketing technology that would make a difference to the business and encourage them to go further. Small businesses have played a pivotal part in rejuvenating communities and finding sustainable futures after the global financial crisis (Gilmore et al. 2013) and may do so again following the current pandemic based in part on government support. However, if the STB owner-manager is not persuaded to have a different approach to marketing enabled by digital technology with clear digital marketing aims and objectives, to say nothing of a specific digital marketing strategy, the opportunities to create greater value from using digital marketing technology will not be effectively exploited and the situation will remain the same.

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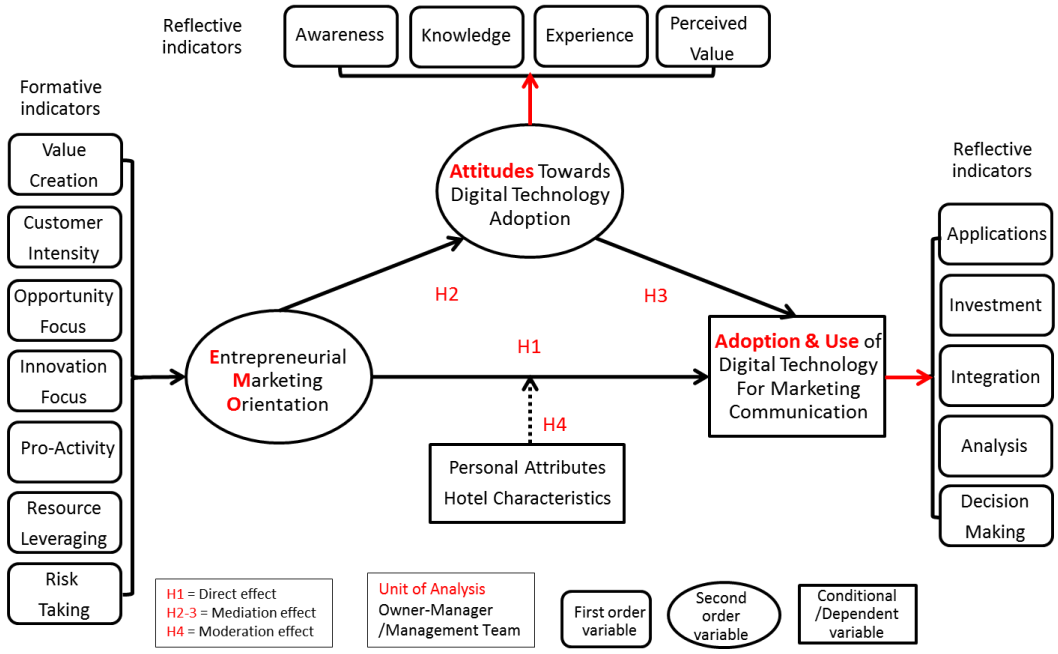
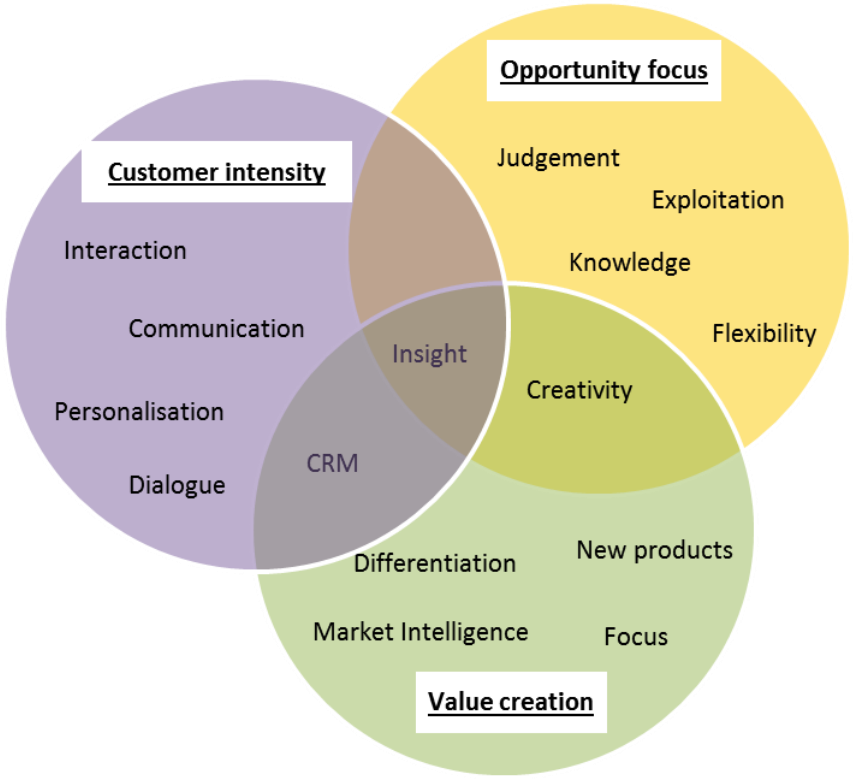
APPENDICES

Appendix A Construct Dimensionality

Conceptual Model



Customer intensity - Related Construct Mapping



Customer Intensity

Definition - an intense, dynamic knowledge of changing customer circumstances and requirements, resourcefulness, relating to customers on a more personal level (Morris et al. 2002). Customer intensity is linked with value creation (Morris and Lewis 1995, Hills et al. 2010, Jones and Suoronta 2013) and opportunity focus through the data that customers provide (Whalen et al. 2015).

Key Words

Communication	
CRM	Overlap with value creation
Dialogue	
Insight	Overlap with value creation and opportunity focus
Interaction	
Personalisation	

Literature foundations

Whalen et al. 2015 involving the customer at every stage is seen as essential as they will sustain the business and provide data for new opportunities and create … competitive advantage. Ioniță (2012) approach is not necessarily logical and sequential but unconventional and 'organic' because they live with their customers' needs and preferences. Morrish 2011 EM is best conceived as an augmented process, where both the entrepreneur and the customer are the core actors, co-creating value within the marketing environment. Miles et al 2011 customers are dynamic resources in the creation of value. Collinson and Shaw (2001) - closeness to the market made possible by smaller size, keen sense of customer needs, wants and demands without the need for expensive and time-consuming market research, and an intuitive ability to anticipate changes in customer demands

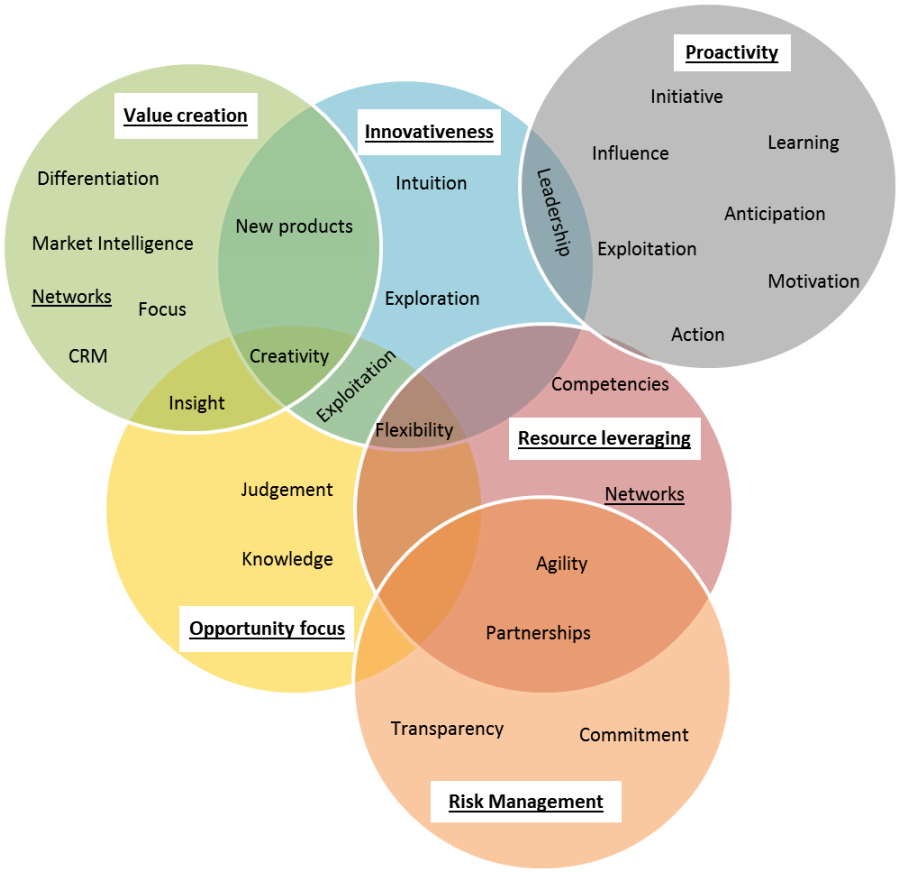
Questionnaire Statement	**Key word**
Customers are communicated with before, during and after their stay	Communication
There are response time targets for customer enquiries	Interaction
The marketing activities reflect knowledge of what our customers want	Insight
Relationships with customers are built through the marketing activities	CRM
Customer profiles, created from data, are used for marketing communication	CRM

Other potential statements	**Overlap/Key word**
Customer data analytics inform marketing communication decisions	Insight/decision
Customer feedback helps me to develop our products and services	Value creation
I use customers as advocates of the business	Interaction
I am aware of my customers preferred communication channels	Personalisation
Information on customers is central to our decision making	Insight
Building face to face relationships are better for this business	CRM

Discarded statements

I am aware of the expectations of my customers and can exceed them	Leading
I have changed the way I communicate with my customers	Vague
The current service we offer is very different to when I started	Not relevant
Everything I do is driven by my customers	Duplication
Customers' needs inform our service offering	Duplication
Customer needs and expectations drive our services	Duplication

Innovativeness - Related Construct Mapping



Innovativeness

Definition – experimentation, exploration and creative acts as reflected in, for example, new products or services, new process technologies, new methods of operation, and new business strategies (Miller 1983 in Covin and Wales 2011). Ideas that translate into marketing activity from internal and external sources (Morris et al. 2002)

Innovativeness is linked with opportunity focus (Renton et al. 2015), value creation (Morrish 2011, Miles et al. 2011, Hills et al. 2008), proactiveness (through learning Miles et al. 2011) and risk taking (Getz and Carlsen 2005).

Key Words

Creativity	Overlap with value creation and opportunity focus
Exploitation	Overlap with proactivity
Exploration	
Flexibility	Overlap with opportunity focus, resource leveraging and risk management
Intuition	
Leadership	Overlap with proactiveness
New Products	Overlap with value creation

Literature foundations

Gilmore (2011) - Innovative marketing for SMEs is complementary to existing activities, builds on prior activities, is continuous, maybe marginal or incremental, can be reactive or market lead, or opportunistic and profit driven – within the characteristics and abilities

of the SME. Morris and Lewis (1995) connect entrepreneurship and marketing e.g. venture idea identification, innovation and opportunity exploitation logically fit with environmental scanning and market opportunity analysis. Environmental turbulence leads to intensified pressure for innovation and entrepreneurship. Collinson and Shaw (2001) EM is characterised by an intuitive ability to anticipate changes in customer demands – the ability to collect market information on a regular, daily basis is imperative and an important competency for the EM manager. Shaw and Williams (2010) Innovation associated with IT and e-marketing is a significant challenge for tourism SMEs as it is linked to knowledge transfer and absorption (i.e. learning process) - both critical to competitiveness.

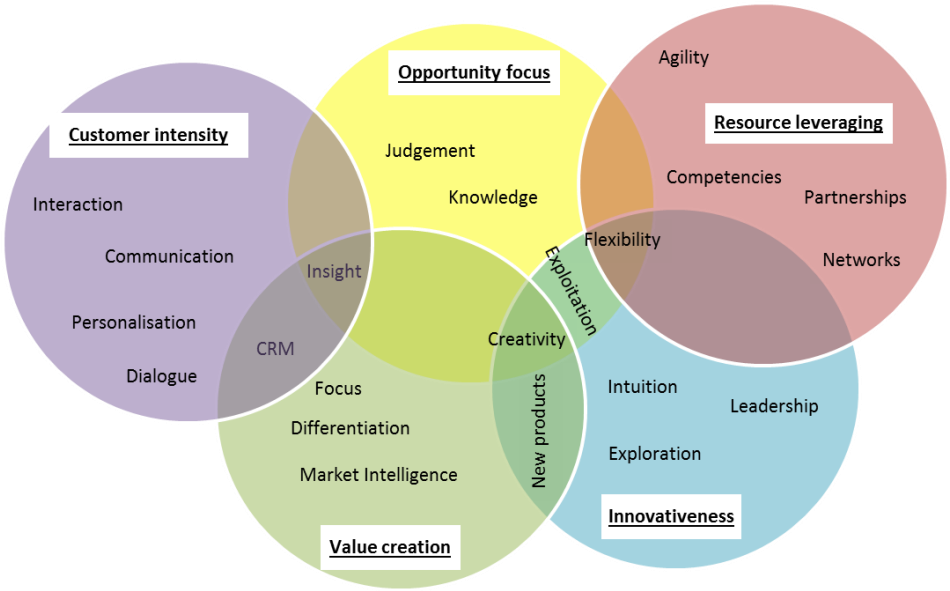
Questionnaire Statement	**Key word**
I frequently try new ideas to differentiate what we offer	Exploration
I am always looking at ways to improve the services we provide	Value creation
I believe our marketing activities will change in the future	Intuition
I accept that failure contributes to learning for the future	Flexibility/risk
Technology has changed our marketing activities	Exploitation

Other potential statements	**Overlap/Key word**
I want to grow and expand	Exploitation
I use internal and external networks to create ideas	Resource lev/Creat
I actively introduce improvements to the business	Creativity
I use internal and external networks to create ideas	Exploitation

Discarded statements

The business is open and structured to support innovation	Vague
I frequently try new ideas and new ways of doing things	Reworded
Marketing communications have greatly changed in the past decade	Vague
I believe our marketing will significantly change in the next 10 years	Not specific
I use internal and external networks to create ideas	Duplication

Opportunity Focus - Related Construct Mapping



Opportunity Focus

Definition – environmental scanning, creative pursuit of opportunity regardless of own, limited resources for a competitive advantage (Morris et al. 2002)

Opportunity focus is linked to proactivity (Jones and Suoronta 2013),

Key Words

Creativity	Overlap with value creation and innovativeness
Exploitation	Overlap with proactivity and innovativeness
Flexibility	Overlap with resource leveraging and risk management
Insight	Overlap with value creation and customer intensity
Judgement	
Knowledge	

Literature foundations

It is one of the three underlying dimensions of entrepreneurship - the others are innovativeness, risk-taking, and proactiveness (Morris et al 2003). From a marketing perspective, it emphasises the need to lead customers and markets (Hamel and Prahalad 1992), and to redefine critical aspects of the external operating environment.
Davis, Morris and Allen (1991) refer to "proactive marketing" and the responsibility for redefining the product and market context within which the firm operates (change), identifying novel sources of customer value, and emphasising unproven wants, new market segments, new technologies, and continuous innovation in all areas of the marketing mix (Morris et al.2003)
Morris and Lewis (1995) connect entrepreneurship and marketing e.g. venture idea identification, innovation and opportunity exploitation logically fit with environmental scanning and market opportunity analysis.

Questionnaire Statement	**Key word**
My market knowledge helps to create new opportunities	Knowledge
I respond quickly to take advantage of unpredictable market events	Flexibility/Exploit
I react to changes in competitor marketing activity	Judgement
I pursue opportunities regardless of money and resource constraints	Judgement
I use analytical applications to identify new marketing opportunities	Knowledge

Other potential statements	**Overlap/Key word**
I feel I need to update my knowledge of the market and industry	Knowledge
I like to network to create new sources of knowledge	Resources
Marketing campaigns need to be tested for learning to take place	Knowledge
I use analytical applications to identify new marketing opportunities	Use
I react to competitor innovations as soon as can	Not Leadership
I look outside existing customers for ideas	Resource/ Creat

Discarded statements

I always need to update my knowledge of the market and industry	Reworded +ve
I react to competitor innovations as soon as can	Reworded
I invest in research and development	Vague
The business has evolved as new opportunities emerged	Unrelated to owner

Proactivity - Related Construct Mapping

Proactivity

Definition – continuous search for new ways to achieve a competitive advantage through incremental change - the extent to which actions are taken to influence and change any aspect of marketing practice (Morris et al 2002) to reduce uncertainty. In essence, the marketer is enhancing the firm's level of control over its own destiny (Morris et al 2003). Miller's (1983) definition is engaging in forward-looking actions targeted at the exploitation of opportunity in anticipation of future circumstances, as would be typical of firms that lead and/or pre-empt the actions of others (e.g. market pioneers, early adopters of new technologies).

Proactivity is linked to the recognition and exploitation of opportunities (Jones and Suoronta 2013), it requires a hands-on management style and usually implies tenacity, adaptability, and some responsibility for failure (Morris et al 2003).

Key Words

Action	
Anticipation	
Exploitation	Overlap with opportunity focus and innovativeness
Initiative	
Leadership/Influence	Overlap with innovativeness
Learning	
Motivation	

Literature foundations

It is one of the three underlying dimensions of entrepreneurship - the others are innovativeness and risk-taking (Morris et al 2003). From a marketing perspective, it emphasises the need to lead customers and markets (Hamel and Prahalad 1992), and to redefine critical aspects of the external operating environment.

Davis, Morris and Allen (1991) refer to “proactive marketing” and the responsibility for redefining the product and market context within which the firm operates (change), identifying novel sources of customer value, and emphasising unproven wants, new market segments, new technologies, and continuous innovation in all areas of the marketing mix (Morris et al.2003)

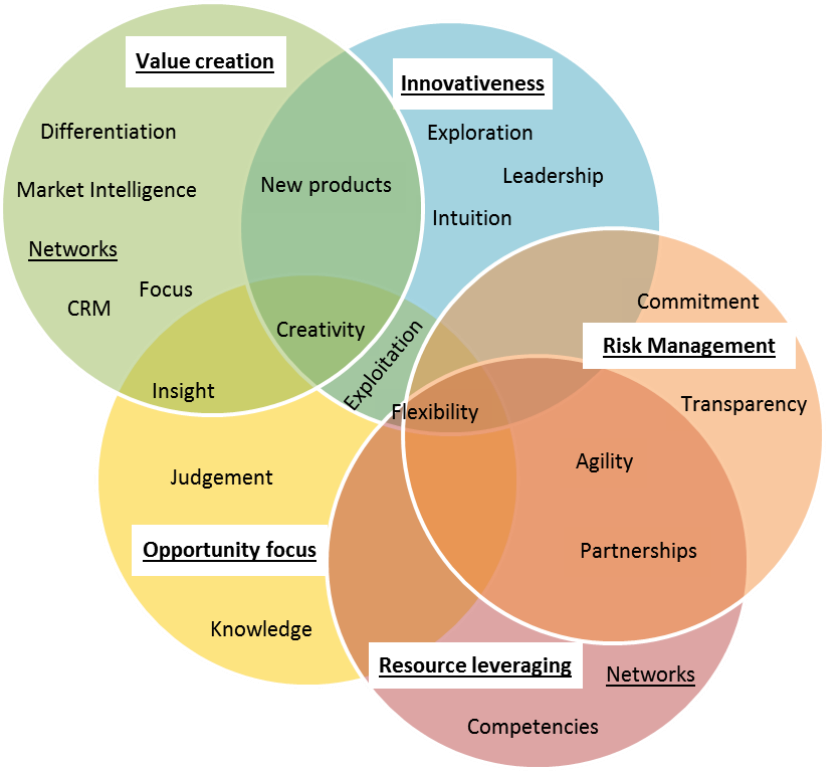
Questionnaire Statement	**Key word**
I look outside existing customers for new ideas	Action
Reviewing the marketing strategy is necessary to grow the business	Anticipation
I review and analyse competitors	Action
I keep up to date with tourism industry developments	Learning
I actively seek to influence customer expectations	Leadership

Other potential statements	**Overlap/Key word**
I am able to respond quickly to changes in the market	Opportunity focus
I am willing to learn and improve my (digital) skills/ competencies	Learning
I believe that definite results are necessary to measure success	Risk
I gain insight from customer data analytics	Customer Intensity
I am open to changing the way I communicate with customers	Customer Intensity
I have identified new opportunities from data analytics	Opportunity focus
I am flexible so I can take advantage of unforeseen opportunities	Agility / Flexibility

Discarded statements

I invest in research and development	Vague
I consider forecasts and market predictions in decision making	Not proactivity
I research competitors and compare my performance	Not proactivity
I can create business opportunities	Creativity

Resource leveraging - Related Construct Mapping



Resource leveraging

Definition – doing more with less and using others' resources (Morris et al. 2002).

Resource leveraging is linked to resources and innovativeness (Morris et al. 2002).

Key Words

Agility	Overlap with resource management
Competencies	
Flexibility	Overlap with opportunity focus and risk management
Networks	Overlap with value creation
Partnerships	Overlap with resource management

Literature foundations

Morris et al. (2002) - any resources are leveraged and stretched to achieve more; utilised for other purposes; externally sourced to achieve specific purposes; combined to create greater value and used in order to gain access to more. The individual is not constrained by the resources under their control and ambition always exceeds resources. Essentially entrepreneurs do more with less through insight, experience and skill. They recognise how to optimise resources, use resources in non-traditional ways and even utilise the resources of others to accomplish their goals (Morris et al. 2002).

Gilmore (2011) - entrepreneurial marketing is based on knowing how SME owner/managers or entrepreneurs actually do business and make decisions within the constraints of limited resources, expertise, impact and size.

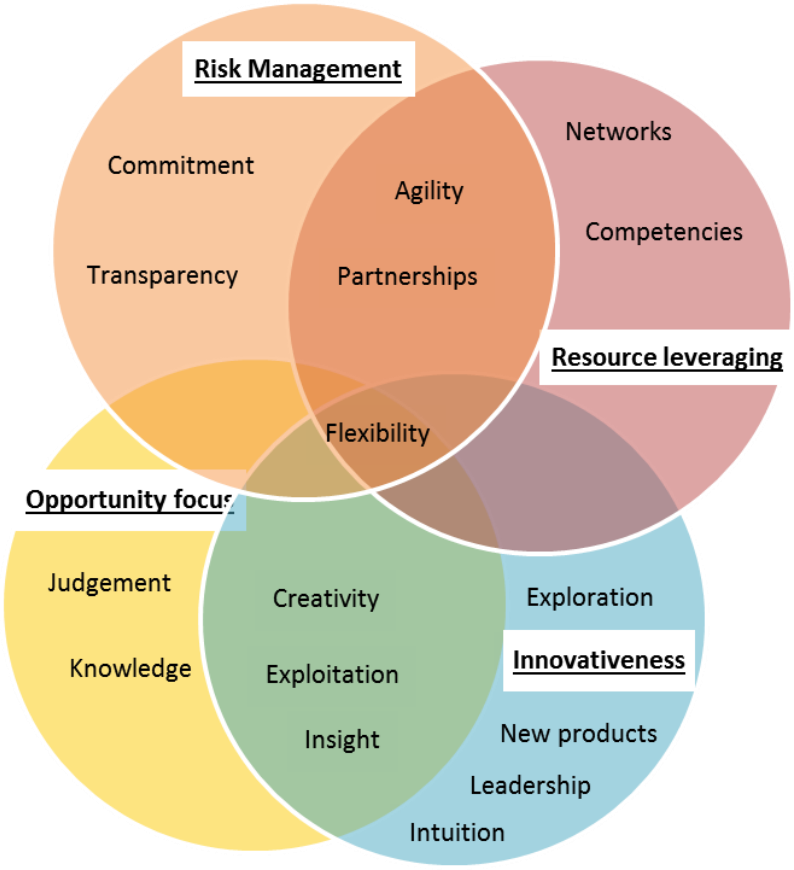
Questionnaire Statement	**Key word**
The staff have digital skills that I am able to use when I need to	Competencies
I always work within the limits of what is available to me for marketing decisions	Risk
I do not use all the customer data available to me for marketing decisions	Competencies
I use my network to develop new ideas for customer marketing	Networks
I am open to working with a wider network outside the industry	Partnerships

Other potential statements	**Overlap/Key word**
I always work within the limits of available resources	Reworded
I have resources that I don't use to full capacity i.e. staff who are digitally savvy	Reworded
There are business resources that are not used to full capacity	Reworded
I understand the ways external networks create value for my business	Value creation
I enlist support from my network whenever possible about customer marketing	Networks
I am a skilled negotiator	Competencies
I could make better use of employees digital marketing skills	Competencies

Discarded statements

I am flexible so I can take advantage of unforeseen opportunities	Opportunity focus
I understand the ways external networks create value for my business	Value creation
I make most of my decisions in isolation	Negative association

Risk management - Related Construct Mapping



Risk Management

Definition – willingness to commit resources to projects, ideas or processes whose outcomes are uncertain and for which the cost of failure would be high (Miller 1983 in Colvin & Wales 2011)
Morris et al (2003) reduce environmental uncertainty, deft allocation or withdrawal of resources to increase flexibility, mitigating risk that is associated with innovation

Risk management is associated with proactiveness and opportunity exploitation (Miles et al. 2011) and innovativeness (Morris et al. 2002, Getz and Carlsen 2005).

Key Words

Agility	Overlap with resource leveraging
Commitment	
Flexibility	Overlap with opportunity focus, resource leveraging and innovativeness
Partnerships	Overlap with resource leveraging
Transparency	

Literature foundations

Morris and Lewis (1995) associate risk-taking with environmental conditions operating at a number of levels. Environmental turbulence leads to short decision windows, diminishing opportunity streams, changing decision contingencies, increased resource specialisation, lack of predictable resource needs, fragmented markets, greater risk of resource and product obsolescence and general lack of long-term control.

Whalen et al. (2015) explain the notion of calculated risk taking is unrealistic and it is difficult to assess and personal to the person taking the risk.

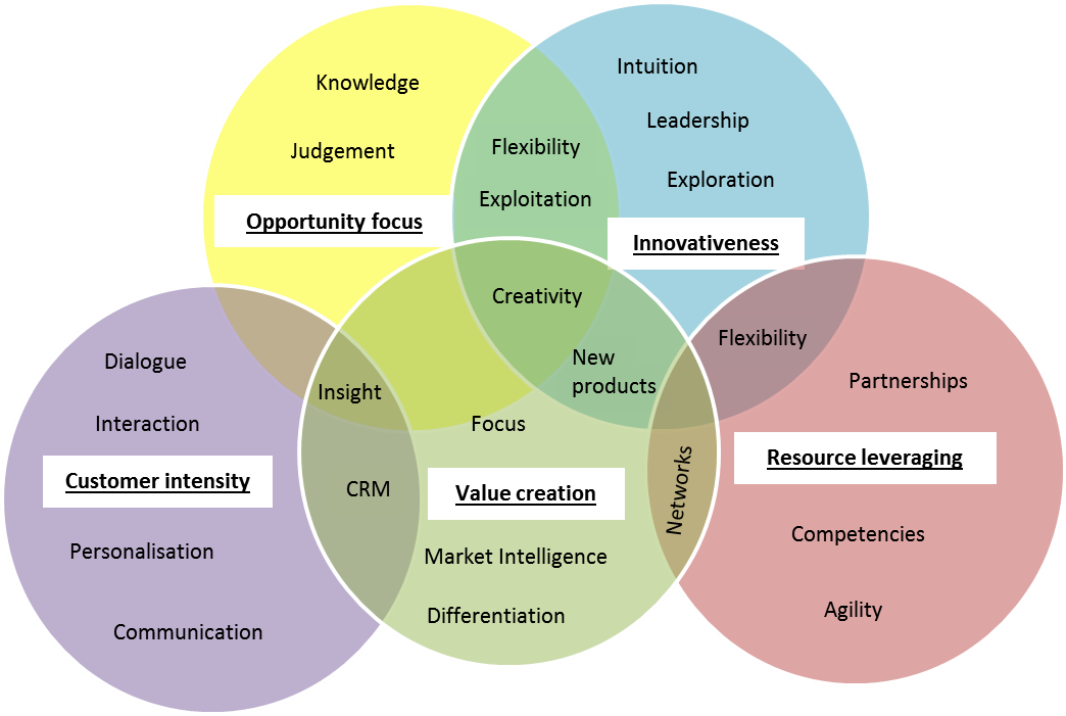
Questionnaire Statement	Key word
The business marketing activities tend to be low risk	Commitment
In uncertain times, I spend more on marketing	Commitment
It is necessary to take risks to improve the service the business provides	Commitment
If I know what the benefits of new technology are, I will invest in it	Commitment /Flex
Customer data security is a risk for this business	Commitment

Other potential statements	Overlap/Key word
I have only committed what I could afford to lose as the business developed	Commitment
I find it difficult to trust third parties and suppliers I work with	Flexibility
I am dependent on external partners and suppliers	Flexibility
I have formal agreements in place with partners	Agility
I like to control the way thembusiness runs its marketing activities	Flexibility
I make gradual, incremental changes to marketing activities	Flexibility
I avoid making marketing decisions that may turn out to be costly	Commitment

Discarded statements

I have developed partnerships for the benefit of customers	Partnerships
I like to control the operating environment	Flexibility
I am willing to invest in new technology	Vague

Value Creation - Related Construct Mapping



Value Creation

Definition - discovering new sources of value for customers, working out ways to add value, combining resources to create value (the reason customers engage with the

business and what is different to competitors) as well as reduce uncertainty (Morris et al 2002). Value creation is linked to innovation (Hills et al. 2008, Hills et al. 2010, Morrish et al. 2010), customer intensity (Morris and Lewis 1995, Hills et al. 2010, Jones and Suoronta 2013) and leveraging network resources (Hills et al. 2010, Morrish et al. 2010)

Key Words

Creativity	Overlap with opportunity focus and innovativeness
Customer insight	Overlap with customer intensity
Differentiation	
Focus	
New products and services	Overlap with innovativeness
Market intelligence	
CRM	Overlap with customer intensity

Literature foundations

Hills et al 2010 – customer value created through relationships, innovativeness, creativity, selling, market immersion, networking and flexibility

Morrish et al 2010 – superior value proposition created through differentiation, leveraging resources (networks), exploiting opportunities and focussing on the needs of customers

Jones and Suaronta 2013 – delivering value comes from organisations driven by customer satisfaction, understanding how customers value products/services, two way communication processes and market intelligence.

Morris and Lewis (1995) - value creation depends on customer feedback and ongoing assessment of needs.

Miles et al. (2011) - customers are dynamic resources in the creation of value

Questionnaire Statement	**Key word**
I can define customer value that provides a competitive advantage	Differentiation
I focus on turning customer information into insight for better experiences	Market Intel
Customer data from digital marketing improves the service we offer	Insight
I change external partners when necessary to create value for customers	Creativity
Marketing activity is driven from by information from customers	Focus

Other potential statements	**Overlap/Key word**
Marketing activities reflect knowledge of our customers	Cust Intensity
Customer feedback helps to develop our products and services	Cust Inisght
Customers' needs inform our service offering	Cust Insight
Building face to face relationships are better for this business	CRM
Customer needs and expectations drive our services	Cust Insight
I look outside existing customers for ideas	Network
I regularly create new products and services	Innovation
I use internal and external networks to create ideas	Resource Lev
I am always looking at ways to innovate the business offer	Innovation

Discarded statements

Reducing costs through digital technology is a way to add value to the business	Value
External networks are a resource that can help to create value for the business	Reworded
I understand the ways external networks create value for my business	Duplication
Using digital marketing communications technology adds value	Use

Attitude towards digital technology adoption

According to Rogers (2003), attitude is an abiding set of beliefs about matters that predispose actions and individual perceptions of attributes are key. The attitude of owner-managers is one of the key determinants in technology adoption (Simmons et al. 2008) - it is grounded in the perception of its benefits (Jones et al. 2014) and it is influenced by how they feel about change and innovation. It can manifest itself on a positive to negative disposition continuum.

Conceptually it is a feeling within the owner-manager (attitude towards technology, emotion) and a perception of it (perceived ease of use of technology, perceived usefulness of technology). Awareness, knowledge, experience and perceived value are considered to be manifestations of influences and any change is expected to produce a change in all four dimensions, therefore they are ***reflective*** of attitude.

Awareness - what digital technology is available for marketing and customer communications

I am aware of the benefits of using digital applications for marketing communications
I seek out new forms of digital marketing technology when I need to
I keep up with the developments of new digital marketing technology
I am aware of my customers preferred marketing communication channels
I am aware of the digital marketing applications available to me

Influence of others (Abrahao et al. 2016); suitability (Moore & Benbasat 1991); competitor influence, technology developments (Srinivasan et al. 2002); awareness, lack of suitable success models (Wymer & Regan 2005); product knowledge (Peltier et al. 2012)

Knowledge - what digital technology can do for the business, understanding how applications and tools work and how they can be used

I know how to measure the return on my investment in digital marketing
Learning about new digital marketing applications is easy for me
*Digital marketing technology provides access to new customers
I know the contribution that digital technology makes to the bottom line
I am reluctant to use new digital technology until I know its benefits to the business

Performance expectation, effort expectation (Abrahao et al. 2016); knowledge (Fillis & Wagner 2005, Simmons et al. 2008, Srinivasan et al. 2002); customer acquisition (Merilainen 2017); demonstrable, willingness, (Moore and Benbasat 1991); absorptive capacity (Ramamurthy et al. 2008); complexity (Ramamurthy et al. 2008, Ritchie & Brindley 2005); risk (Simmons et al. 2008); trust, willingness to adopt (Wymer & Regan 2005)

Experience – what types of applications and tools have been used in the past, what has worked and what has not

I am experienced in using different digital marketing technology for communications
I have created new marketing opportunities using digital technology
I draw upon personal experience for marketing communication decisions
I try out new digital marketing applications before I buy into them
I am not confident using new digital marketing technology

Influence of others (Abrahao et al. 2016), prior experience (Wymer & Regan 2005, Simmons et al. 2008 Spencer et al. 2012, Srinivasan et al. 2002); ease of use, ability to trial, willingness (Moore and Benbasat 1991), attitude to change (Peltier et al. 2012), skills (Ritchie & Brindley 2005, Wolcott et al. 2008, Wymer & Regan 2005), ability (Simmons et al. 2008); confidence (Wymer & Regan 2005)

Perceived value - how technology will add value to the business in terms of efficiency, reduced costs and customer experience

*Digital customer data is easier to manage than other forms of data
It is easy to build customer relationships using digital marketing technology
*Digital technology improves the quality of our marketing communication
*Digital marketing technology is growing in importance for this business
*There are additional business costs that come from digital marketing technology

Priority, cost (Wymer & Regan 2005), cost (Ritchie & Brindley 2005); customer experience (Merilainen 2017), competitive advantage (Ramamurthy et al. 2008, Peltier et al. 2012, Srinivasan et al. 2002); switching costs (Peltier et al. 2012); perceived benefits, perceived costs, uncertain ROI (Simmons et al. 2008); responsiveness (Srinivasan et al. 2002); perceived usefulness, effective communication (Srinivasan et al. 2002); perceived value (Wolcott et al. 2008, Wymer & Regan 2005)

Personal Attributes

Question	Construct
What is your age?	Personal Att
How many years have you owned/managed thebusinessl?	Personal Att
What is your highest level of academic qualification?	Personal Att
What are your professional qualification(s)?	Personal Att

Business characteristics

Question	Construct
How many months a year is the business open?	Business Ch
How many serviced guest bedrooms are there?	Business Ch
How many people are employed – Full time and Part Time?	Business Ch
What is the annual turnover ?	Business Ch

Adoption and Use of Digital Technology

Question	Construct
In the past year, approx how much was spent on Digital/Non Digital Marketing?	Invest Money
In the past year, approx how much was spent on digital marketing with 3rd parties?	Investment
How many employees are responsible for digital marketing excluding yourself?	Invest Money
What percentage of your time is normally spent on digital marketing per week?	Invest Time
Which channels does the buisness have for digital marketing communications?	Apps Total
On average, how often are these channels used?	Invest Time
Which of the following paid channels are used for marketing	Apps Total

communications?	
How often are these paid marketing channels used?	Invest Time
Which applications does the business have for marketing analysis?	Apps Total
How often are these analysis applications used?	Invest Time
Digital marketing apps and channels are/are not linked to analysis apps	Integration
All customer data generated by digital marketing is/is not stored in a database	Integration
Digital marketing campaigns are always/never tested for response rates	Analysis
Changes in web site content are always monitored when they go live	Analysis
Customer data generated by digital marketing technology is always/never analysed	Analysis
Customer response analysis is always/never used to generate follow up campaigns	Decision M
Customer data analysis is always/never used for digital marketing campaigns	Decision M
Customer data analysis is used/ not used to plan the marketing strategy	Decision M
Customer data analysis is used/not used to identify potential new customers	Decision M
Customer data is analysed /not analysed to identify new markets	Decision M

Measurement Items - Validation through previous studies

Customer intensity

Published statements for Customers are communicated with before, during and after their stay	Author(s) and year
Responsiveness to customer feedback and behaviour	Jones & Suaronta
Communication with customers is regular	Harrison et al. 2011
We encourage customer comments and complaints because they help us do a better job	Elliott & Boshoff 2007
Published statements for There are response time targets for customer enquiries	
Customer complaints fall on deaf ears in this business unit	Kohli et al. 1993
We measure customer satisfaction systematically and frequently	Eggers et al. 2017
We set regular measures of customer satisfaction	Despandhe & Farley 1998
Published statements for Customer profiles, created from data, are used for marketing communication	
Information on customers is central to our decision making	Harrigan et al. 2011
Our database is a key business tool	Harrigan et al. 2011
Customers are targeted when we have an opportunity for competitive advantage	Wijeskara et al. 2016
Published statements for Marketing activities reflect knowledge of what our customers want	
We are slow to detect changes in our customers' product preferences	Kohli et al. 1993
When we find out that customers are unhappy with our service quality, we take corrective action immediately	Kohli et al. 1993
Customised approach, speedy reaction to shifts in customer preference	Jones & Suaronta 2013
My business' marketing efforts reflect knowledge of what customers really want from us	Fiore et al. 2013
Published statements for Relationships with customers are built through marketing activities	
On-going dialogue with customers	Jones & Suaronta 2013
Difficult to develop trust online	Harrigan et al. 2011
I am satisfied that the internet assist us in maintaining relationships with existing customers	Elliott & Boshoff 2007

Innovativeness

Published statements for I frequently try new ideas to differentiate what we offer	Author(s) and year

I believe it is important to continually look for new ways to do things in business	Robinson et al. 1991
We are the first to introduce new products/ services, administrative techniques, operating technologies etc.	Covin & Slevin 1989
Our business is often the first to market with new products or services	Eggers et al. 2017
We consistently develop new, spectacular marketing concepts, which our competitors imitate	Eggers et al. 2017
Our business has added very many new features to our service	Elliott & Boshoff 2007
In dealing with competitors, we are often the first business to introduce new products and ways of marketing	Elliott & Boshoff 2007
Published statements for I am always looking at ways to improve the services this business provides	
Changes in product or service lines have usually been quite dramatic	Covin & Slevin 1989
Our business seeks new ways to do things	Hughes & Morgan 2007
We consider ourselves as an innovative company	Eggers et al. 2017
Formal and informal policies, procedures, practices and incentives for creativity and knowledge	Jones & Suaronta 2013
We constantly refine and develop existing services, we constantly develop new business ideas	Elliott & Boshoff 2007
Published statements for Digital technology has changed our marketing activities	
Changes in our service features or packages have usually been quite significant	Elliott & Boshoff 2007
Published statements for I believe our marketing activities will change in the future	
I believe it is more important to think about future possibilities than past accomplishments	Robinson et al. 1991
Competitors in this market recognise us as leaders in innovation	Eggers et al. 2017
Innovation is the key to achieving competitive advantage in this business	Fiore et al. 2013
Our bsusiness is innovative in the way it markets its services	Elliott & Boshoff 2007
Published statements for I accept that failure contributes to learning for the future	

Opportunity focus

Published statements for 'My market knowledge helps to create new opportunities'	Author(s) and year
I create the business opportunities I take advantage of, I get excited creating my own business opportunities	Robinson et al. 1991
We consistently pick up ideas from other industries to surprise our customers and competitors	Eggers et al. 2017
My business excels at identifying marketing opportunities	Fiore et al. 2013
We work to find new business or markets to target	Eggers et al. 2017
Reliance on intuition and experience	Jones & Suaronta 2013

We are aware of how our customers market their products	Elliott & Boshoff 2007
Published statements for 'I can respond quickly aiming to take advantage of unpredictable market events'	
Leader, preparedness to seize opportunities, commitment to exploit opportunities, flexible	Jones & Suaronta 2013
When new marketing opportunities arise, my business very quickly acts on them	Fiore et al. 2013
In order to exploit potential opposrtinities we will make bodl aggressive decisions	Elliott & Boshoff
Published statements for 'I react to changes in competitor marketing activity'	
We are slow to detect fundamental shifts in our industry	Kohli et al. 1993
If a major competitor launched a campaign to our customers we would respond immediately	Kohli et al. 1993
We typically adopt, a very competitive, 'undo the competitors' posture	Covin & Slevin 1989
Follower, reactive to competitors	Jones & Suaronta 2013
Do competitor's new product development influence you	Jones 1999
We rapidly respond to competitor's actions	Elliott & Boshoff 2007
Published statements for 'I use analytical applications to identify new marketing opportunities'	
I believe that to be successful in business you must spend some time every day developing new opportunities	Robinson et al. 1991
Our business emphasises exploration and experimentation for opportunities	Hughes & Morgan 2007
We consistently look for new business opportunities	Eggers et al. 2017
My business excels at identifying marketing opportunities	Fiore et al. 2013
Published statements for 'I pursue opportunities regardless of money and resource constraints'	
I often sacrifice personal comfort in order to take advantage of business opportunities	Robinson et al. 1991
I regularly pursue untapped marketing opportunities regardless of budgetary or staff constraints	Fiore et al. 2013

Proactiveness

Published statements for I keep up to date with tourism industry developments	Author(s) and year
Typically seeks to avoid competitive clashes, preferring a live and let live posture	Covin & Slevin 1989
… regularly discuss competitors's strengths and weaknesses	Wijesekara et al. 2016
Published statements for I review and analyse competitors	
Typically responds to actions which competitors initiate	Covin & Slevin 1989
Are you aware of any competitors and their products	Jones 1999

We understand the nature of our competitors, we know our competitors well	Elliott & Boshoff 2007
We monitor our … competitors to find new ways to improve …	Despandhe & Farley 1998
Published statements for I look outside existing customers for new ideas	
External intelligence gathering	Jones & Suaronta 2013
We excel at identifying opportunities	Covin & Slevin 1989
Published statements for I actively seek to influence customer expectations	
Our marketing efforts try to lead customers, rather than respond to them	Eggers et al. 2017
We continuously try to discover additional needs of our customers of which they are unaware	Eggers et al. 2017
Technological leadership, strives to lead customers	Jones & Suaronta 2013
Published statements for Reviewing digital marketing strategy is necessary to grow the business	
Commitment to exploiting opportunities	Jones & Suaronta
The owner-manager makes time to manage the internet marketing of our business	Elliott & Boshoff 2007
I consistently monitor and improve the approach to marketing my business	Fiore et al. 2013

***Resource leveraging**

Published statements for I am open to working with a wider network outside the industry	Author(s) and year
We consistently pick up ideas from other industries to surprise our customers and competitors	Eggers et al. 2017
Collaborative	Jones at Suaronta 2013
Published statements for I use my network to develop new ideas for customer marketing	
We use connections to friends, business partners, etc. to get cost efficient access to information & advice	Eggers et al. 2017
Gathering intelligence through personal contact networks and web-based networks, use of networks	Jones & Suaronta 2013
Published statements for I always work within the limits of what is available to me	
I make a conscientious effort to get the most out of my business resources	Robinson et al. 1991
Our business has made substantial changes in the business organisation	Wijesekara et al. 2016
Published statements for The staff have digital skills that I am able to use when I need to	
The firm encourage employees to develop new ideas	Wijesekara et al. 2016

***Risk management**

Published statements for Our marketing activities tend to be low risk	Author(s) and year
Changes in product or service lines have usually been quite dramatic	Covin & Slevin 1989
A strong proclivity for low-risk projects with normal and certain rates of return	Covin & Slevin 1989
Typically cautious wait and see posture to minimise the probability of making costly decisions	Covin & Slevin 1989
We encourage people in our company to take risks with new ideas	Hughes & Morgan 2007
My marketing efforts tend to have low level of risk for my business	Fiore et al. 2013
Published statements for It is necessary to take risks to improve the service of the business	
Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve objectives	Covin & Slevin 1989
To make effective changes to our offering, we will accept at least a moderate level of risk of significant losses	Eggers et al. 2017
Calculated risk-taking	Jones & Suaronta 2013
When I decide to pursue a new marketing direction, I do so in stages to reduce risk	Fiore et al. 2013
Due to the environment, bold and wide-ranging actions are necessary to achieve the business objectives	Elliott & Boshoff 2007
Published statements for In uncertain times, I spend more on marketing	
Bold, aggressive postures are necessary to maximise the probability of exploiting potential opportunities	Covin & Slevin 1989
We engage in risky investments to stimulate future growth	Eggers et al. 2017
My business typically uses creative, low cost ways to reduce risks associated with new marketing activities	Fiore et al.2013
Published statements for If I know the what the benefits of new technology are, I will invest in it	
A strong proclivity for high-risk projects	Covin & Slevin 1989
People are encouraged to take calculated risks with new ideas	Hughes & Morgan 2007

Value creation

Published statements for 'I can define the value that our customers receive that provides a competitive advantage'	Author(s) and year
Our strategy for competitive advantage is based on our understanding of our customers' needs	Eggers et al. 2017 Despandhe & Farley 1998
Differentiation strategies using product quality, competitive advantage based on understanding customer needs	Jones & Suaronta 2013

Understanding how customers value product/service	Jones & Suaronta 2013
Does your product/service that you offer differ from the competition?	Jones 1999
Published statements for 'I focus on turning customer information into insight for better customer experiences'	
driven by customer satisfaction, customer knowledge based on market immersion	Jones & Suaronta 2013
Communicating with customers is a great way to identify innovation opportunities	Fiore et al. 2013
Our business strategies are customer focus	Despandhe & Farley 1998
Published statements for 'Customer data from digital marketing improves our service'	
I spend a considerable amount of time making any organisation I belong function to function better	Robinson et al. 1991
Electronic information on customers compliments our other knowledge	Harrigan et al. 2011
I am satisfied that the internet improves our ability to find out information about customer, competitors and industry	Elliott & Boshoff 2007
I am satisfied that the internet enhances our customer service	Elliott & Boshoff 2007
Published statements for 'I change external partners when necessary to create value for customers'	
I usually seek out colleagues who are excited about exploring new ways of doing things	Robinson et al. 1991
We use connections to other companies to increase our offerings in cost-efficient ways	Eggers et al. 2017
Creation of value through relationships/alliances	Jones & Suaronta 2013
Published statements for 'Digital marketing activity is driven by my customers'	
Two-way marketing with customers	Jones & Suaronta 2013
The value of a customer dictates whether we will use internet technology in the relationship	Harrigan et al. 2011
Customer relationships are what marketing in firm is about	Harrigan et al. 2011
My business continuously tries to find new ways to create value for customers	Fiore et al. 2013

DT provides info from customers and competitors that I can use to create value and opportunities for growth	Despandhe & Farley 1998
Trying brand new marketing ideas before competitors helps me to learn even if they do not work out as I hoped	Miller 1983 (part)

Attitude towards technology

***Awareness**

Published statements for I am aware of my customers preferred marketing communication channels	Author(s) and year
Customers differ in preferences how to contact firm	Harrigan et al. 2011
We are quick to detect changes in customer preferences	Elliott & Boshoff 2007

***Knowledge**

Published statements for I know how to measure the return on digital technology investment	Author(s) and year
The owner-manager knows what is required to make the internet effective for marketing	Elliott & Boshoff 2007
I am satisfied that internet marketing reduces our marketing costs	Elliott & Boshoff 2007
Published statements for I know what contribution digital technology makes to the bottom line	
The owner-manager understands the issues surrounding the use of the internet for marketing	Elliott & Boshoff 2007

***Experience**

Published statements for I am experienced in using different digital marketing technology for communications	Author(s) and year
The owner-manager understands enough about internet marketing to make informed decisions	Elliott & Boshoff 2007
Published statements for I have created opportunities using digital marketing technology	
I have a gut feeling for potential opportunities	Tang et al. 2010
Published statements for I draw upon personal experience for marketing communication decisions	
The owner-manager is knowledgeable about the use of the internet for marketing	Elliott & Boshoff 2007
Published statements for I try out new digital marketing applications before I buy into them	
I make an effort to link new knowledge with my pre-existing experience	Holcomb et al.2009
Published statements for I am not confident using new digital marketing technology	

***Perceived value**

Published statements for *Digital customer data is easier to manage than other forms of data	Author(s) and year
Electronic information is more easily managed	Harrigan et al. 2011
Published statements for It is easy to build customer relationships using digital marketing technology	
Face to face relationships preferred by customer/firm	Harrigan et al. 2011
Internet communication proactively used to develop customer relationships	Harrigan et al. 2011
I am satisfied that the internet assist us in maintaining relationships with existing customers	Elliott & Boshoff 2007
Published statements for *Digital technology is growing in importance for this business	
Internet communication key to business	Harrigan et al. 2011
Published statements for *Digital technology improves the quality of our marketing communication	
Internet communication has improved communication	Harrigan et al. 2011
I am satisfied that use of the internet improves the effectiveness of advertising and promoting our business	Elliott & Boshoff 2007

Adoption and Use of Technology

Personal Attributes

Published statements for What is your age?	Author(s) and year
What is your age category?	Jones 1999
Published statements for How many years have you owned/managed the business?	
How long has it been trading?	Royle & Laing 2014
Current role	Quinn et al. 2016
Published statements for What is your highest level of academic qualification?	
What is your highest level of educational experience?	Jones 1999

Business characteristics

Published statements for How many people are employed by the business – Full time and Part Time?	Author(s) and year
How many employees are there?	Royle & Laing 2014
How many employees does the company have part time and full time?	Jones 1999

Adoption of applications

Published statements for Which channels do you have for digital marketing communications?	Author(s) and year
Company website, email newsletters, blogs	Taiminen Karjaluoto 2014
What digital marketing does your organisation utilise? What software do you use?	Royle & Laing 2014
Published statements for Which of the following paid channels do you have for marketing communications?	
Search engine advertising, email advertising, online advertising	Taiminen Karjaluoto 2014
Published statements for Which applications do you have for marketing analysis?	

***Investment in applications and systems**

Published statements for On average, what % of turnover is spent on: Digital/Non Digital Marketing?	Author(s) and year
Digital marketing budget allocation	Taiminen Karjaluoto 2014
What other methods does the organisation use to communicate with customers?	Royle & Laing 2014
Published statements for How many employees are responsible for digital marketing communications?	
Do you have specialist, qualified marketing staff?	Jones 1999
Published statements for What percentage of your time is normally spent on digital marketing per week?	
Who are the key decision makers and influencers?	Quinn et al. 2016
The owner-manager actively participates in managing the internet for marketing the business	Elliott & Boshoff 2007
The owner-manager is involved in decision making about the internet marketing of our business	Ellitt & Boshoff 2007
Published statements for If applicable, what % of annual t/o is usually spent on 3rd parties for digital marketing?	

Do you undertake digital marketing in-house or do you employ an agency?	Royle & Laing 2014

Integration

Data from digital technology is stored in a database for customer insight	Ransbotham & Kiron 2018
Data from digital technology channels is integrated for marketing communications	LaValle et al. 2010
Digital communication channels are linked to analysis applications to track responses	Chaffey & Patron 2012
Online booking provides revenue data for different communication channels	Chaffey & Patron 2012
Integrated data is visualised through a digital marketing dashboard	LaValle et al. 2010
Our website is integrated with other systems (order processing, logistics etc.)	Bengtsson et al. 2007

Analysis

This business is differentiated from competitors through customer and market analysis	LaValle et al. 2010
Digital customer data is captured and stored for analysis purposes	LaValle et al. 2010
Digital marketing channels are analysed for up-to-date information	LaValle et al. 2010
Marketing communications are tested and analysed to maximise responses	Chaffey & Patron 2012
Customer data analysis is used to inform customer segmentation and targeting	Chaffey & Patron 2012

Decision making

Data is analysed to guide day-to-day marketing communications activities	LaValle et al. 2010
Customer data is analysed for marketing communications planning	LaValle et al. 2010
New or updated content on digital channels is informed by customer data analysis	Chaffey & Patron 2012
Our marketing communications are responsive to online customer behaviour	Chaffey & Patron 2012
Customer feedback from digital channels is used to improve our service	Ransbotham & Kiron 2018
Business decisions are driven by analytics	Chaffey & Patron 2012

Act on web analytics data to improve site performance	Chaffey & Patron 2012

Other statements

Optimizing performance of and conversions from marketing campaigns	Chaffey & Patron 2012
Digital marketing channels are used to generate awareness of the business	
Digital marketing communication responses are used for follow up campaigns	
Tactical digital marketing campaigns are tested for conversion rates	
New or updated content on digital marketing channels is monitored for responses	
Customer data is analysed to identify new markets	
Digital marketing communications are analysed for conversion rates to bookings	

Appendix B Word version of the online survey questionnaire

Bournemouth University

Appendix A – Word version of the online survey questionnaire

PART I: ABOUT YOUR BUSINESS

1 **What is your tourism business type?** *Please ✓one of the following options*

Hotel, B&B or Guest House	☐	Recreation/Leisure Attraction	☐	Restaurant or Café	☐
Self-catering Accommodation	☐	Cultural Attraction	☐	Fast Food or Take-away	☐
Campsite, Caravan or Holiday Park	☐	Tour Operator	☐	Pub, Inn or Bar	☐

Other *(please describe)*

2	**Is your business independently owned?** *(Please '✓' one)*	**Yes** ☐	**No** ☐
3	**How many months per year is your business open?**		
4	**How many serviced guest bedrooms do you have?** *(For non-accommodation businesses, use 0)*		
5	**How many FT employees does your business have?** *Excluding yourself - More than 35 hours per week*		
6	**How many PT employees does your business have?** *Less than 35 hours per week*		
7	**Approximately how many seasonal employees dos your business employ each year?**		
8	**What was the approximate annual turnover of your business last year?** *to the nearest £000 i.e. 50000*	£	

PART II: DIGITAL MARKETING

9 **In the past 12 months, approximately how much was spent on digital and non-digital marketing by your business in the following areas** *(to the nearest £500 i.e. £2,500 = 2500)*

	In-house or internal marketing spend	External (agency supplier) marketing spend
Digital marketing *(e.g. email, social media, search marketing, digital advertising)*		
Other day-to-day digital running, staff, hosting or commission costs		
Online customer behaviour and response analysis		
One-off digital investment costs *(e.g. website setup/development, online booking system, database set up, equipment)*		
Non-digital marketing (e.g. *printed brochures, print advertising, direct mail)*		

10	**How many employees (excluding yourself) are involved in digital marketing?**	
11	**In the last four weeks, approximately how many hours did you spend on digital marketing activities?** *(e-mail campaigns, updating websites, blogs, social media, digital advertising etc.)*	

12 **Which of the following digital channels does your business use for communication?** *(Please select one option for each channel)*

	Have and use	Have and do not use	Do not have
Own website with online booking			
Own website without online booking			
Referral websites			
Email e.g. outlook			
Email e.g. MailChimp			
Blog			
Facebook			
Pinterest			
Twitter			
Instagram			
Snapchat			
TripAdvisor			
Booking.com			
YouTube			
Google My Business			
Google+			
LinkedIn			

1

12a Please add any other digital channels that you HAVE AND USE for digital marketing communication that are not listed above

13 **Which of the following PAID channels does your business use for advertising and marketing?** *(Please select one option for each channel)*

	Yes	No		Yes	No		Yes	No
Google Adwords			Snapchat Ads			Facebook Ads		
Google+ Ads			TripAdvisor			Pinterest Ads		
LinkedIn Ads			Booking.com			Twitter Ads		
Referral Websites			YouTube Ads			Instagram Ads		

13a Please add any other PAID channels that you use that are not listed above

14 **Which applications does your business use for customer data analysis?** *(Please select one option for each channel)*

	Have and use	Have and do not use	Do not have
Facebook Insights			
Twitter Analytics			
Instagram Analytics			
Googel Alerts			
Pinterest Analytics			
YouTube Analytics			
Booking.com Analytics			
Email Analysisi			
TripADvisor Analytics			
E-newlsetter Analytics			
LinkedIn Analysis			

14a Please add any other applications that you HAVE AND USE for customer data analysis that are not listed above

In the next three sections, please indicate to what extent you use digital technology for marketing communication for each of the following statements. *(Please click one option for each statement)*

15. Customer data storage & integration	Always	Mostly	Partly	Not at all	Unsure
1. Digital marketing channels are linked to analysis tools to track online customer behaviour					
2. Customer data summaries are visualised for each of the digital marketing channels we use					
3. Our online booking system provides revenue data from different digital channels					
4. Customer data generated from different digital channels are integrated with other systems					
5. Customer data from different marketing activities are stored in a customer database					
16. Analysing customer data					
1. Customer data from digital marketing channels is analysed					
2. Customer data analysis is used to inform customer targeting					
3. Digital marketing channel data are analysed for the latest customer information					
4. Market information (e.g. prices, competitors, industry) is accessed using the internet					
5. Digital marketing campaigns are tested to maximise customer response					
17. Making marketing communication decisions					
1. New or updated content on digital channels is informed by customer data					
2. Digital customer data guides day-to-day marketing communication activities					
3. Digital customer data is used for marketing communication planning					
4. Our marketing communication is responsive to online customer behaviour					
5. Customer feedback from digital channels is used to improve					

our service						

PART III: YOU AND DIGITAL MARKETING TECHNOLOGY

In the next four sub-sections, please indicate your level of agreement with these statements about your relationship with digital technology for marketing communication *(Please ✓one box for each statement)*

18. Your awareness of digital technology (AW)	Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. I am aware of the benefits of using digital marketing technology						
2. I am aware of my customers preferred digital communication channels						
3. I keep up with developments of new digital marketing technology						
4. I seek out new forms of digital marketing technology when I need to						
5. I am aware of the digital tools available to me for marketing communication						
19. Your knowledge of digital technology (KN)						
1. I know the contribution that marketing using digital technology makes to the bottom line of the business						
2. Learning about new digital marketing technology is easy for me						
3. I know how to measure the return on my investment in digital marketing technology						
4. Using digital marketing technology provides access to new customers						
5. I am reluctant to use new digital marketing technology until I know its benefits to the business						
20. Your experience of digital technology (EX)						
1. I am confident using digital marketing technology that is new to me						
2. I have created new marketing opportunities using digital technology						
3. I try new digital marketing applications before I buy into them						
4. I draw upon personal experience for all my digital marketing communication decisions						
5. I am experienced in using different digital marketing technologies						
21. Value of digital technology (PV)						
1. Customer data from digital channels is easier to manage than other forms of customer data						
2. It is easy to build customer relationships using digital technology						
3. There are additional business costs that come from using digital marketing technology						
4. Digital technology is growing in importance for marketing communication for this business						
5. Digital technology improves the quality of our marketing communication						

PART IV: YOUR CUSTOMERS AND SERVICE OFFERING

22. Thinking about <u>your customers and the service you offer</u>, please indicate your level of agreement with the statements below:

Please ✓one box for each statement	Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. Customers are communicated with before, during and after their experience with us						
2. Relationships with customers are built through our marketing activities						
3. The marketing activities of this business reflect the knowledge of what our customers want						
4. There are response time targets for customer enquiries						
5. Customer profiles, created from data, are used to develop marketing communication						
6. I change suppliers or partners when necessary to create value for customers						

7. Our service provides customer value that gives us a competitive advantage						
8. Marketing activity is driven by information from our customers						
9. Using customer data from digital marketing communication improves the service we offer						
10. I focus on turning customer data into insight to create a better customer experience						

PART IV: MARKETING ACTIVITIES AND RESOURCES

23. Thinking about your marketing, please indicate your level of agreement with these statements :

Please ✓ one box for each statement	Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. If I know what the benefits of new technology are, I will invest in it						
2. Customer data security is a risk for this business						
3. Our marketing activities tend to be low risk						
4. It is necessary to take risks to improve the service we provide						
5. In uncertain times, I spend more on marketing						
6. Our staff have digital marketing skills that I am able to use when I need to						
7. I use all the customer data available to me for marketing decisions						
8. I use my business network to develop new ideas for customer marketing						
9. I am open to working with a wider network outside the tourism industry						
10. I always work within the limits of what is available to me for marketing decisions						

PART VI: MARKETING OPPORTUNITIES

24. Thinking about <u>new marketing opportunities</u>, please indicate your level of agreement with these statements:

Please ✓ one box for each statement	Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. I look outside existing customers for new opportunities						
2. I actively seek to guide customer experiences						
3. I review marketing activities of competitor businesses						
4. Reviewing our marketing activity is necessary to grow the business						
5. I keep up to date with tourism industry developments						
6. I pursue marketing opportunities regardless of money and resource constraints						
7. I use analysis tools and applications to identify new marketing opportunities						
8. I react to changes in competitor marketing activity						
9. I respond quickly to take advantage of unpredictable market events						
10. My market knowledge helps me to identify new opportunities						
11. Digital technology has changed our marketing activities						
12. I accept that failure can contribute to learning for the future						
13. I believe that our marketing activities will change in the future						
14. I am always looking at ways to improve the services this business provides						
15. I frequently try new ideas to differentiate what the business offers						
16. I use customer data to gain insight to create customer value and opportunities for growth						
17. Trying brand new marketing ideas before my competitors helps me to learn even if they do not work						

out							

PART VII: FINALLY ABOUT YOU

25 **What is your age?**

26 **How many years have you owned or managed this or other businesses?**

27 **What is your highest level of educational qualification?** *Please ✓one*

No qualifications		**Higher National Certificate / Diploma**	
O'Level / GCSE / equivalent		**Undergraduate University Degree** (BA, BSc)	
A'Level / equivalent		**Postgraduate University Degree** (Masters, PhD)	

a **What is your main professional qualification?** *(please describe)*

28 Email address field

Appendix C Example copy provided to DMOs

Digital Marketing - helping us to help you

Wye Dean Tourism has teamed up with Bournemouth University to bring you a survey about your use of digital marketing technology.
Digital technology is now an integral part of our world with over 85% of people using it to plan their time away. Yet, according to the European Tourism Forum, over 40% of tourism businesses are not using any form of digital marketing technology.
By completing this 15-20 minute survey, you will help us to help you make the most of the opportunities that digital marketing technology provides.
So put the kettle on, take a break and let us know by copying the link below into your web browser …

116 words

Digital Marketing - helping us to help you follow up

Thank you everyone who has participated so far. To take a look at the survey and take part, please copy and paste the link in to your web browser...
The survey will take up to 15 minutes to complete, and it could help, as you'll be asked questions that might make you take another look at how (or even if!) you use digital marketing. Many local businesses have embraced it as another way to get in front of customers - how successful has it been (or even hasn't been)? Take the survey, and let us know and you'll get to see the results first-hand!
Here's the link

115 words

Digital Marketing - working together follow up

Just a quick reminder that our digital marketing survey is still open – by taking part, we can work together with Bournemouth University to embrace the challenges and opportunities that digital marketing technology provides.
Did you know that you can contact the experts at Bournemouth University with any digital marketing questions you may have? Contact details are given on the first page.
So please take a few minutes, copy and paste the link below and consider the possibilities that your business can achieve by working together with us.

91 words

Digital Marketing - reminder survey is still open follow up

After the great summer we have had, you may not have had chance to complete the digital marketing survey yet. We would love to hear back from you as it is still open.

Digital marketing offers you great opportunities to make the most of unexpected events and find new customers. Many local businesses are embracing digital marketing technology because their customers use it to plan and travel. By taking part, you can take some time (about 15 minutes) to evaluate how you use digital marketing technology, make comparisons to other local businesses and you will see the results first-hand!

So please take a few minutes, copy and paste the link below to take part.

112 words

Appendix D Recoding tables

Table A: Digital applications response recoding

Digital Channel	Paid Digital Application	Analysis Application
RECODE WebBooking (1=3) (3=1)	RECODE FacebookAds (1=2) (2=1)	RECODE FacebookInsights (1=3) (3=1)
RECODE WebNoBooking (1=3) (3=1)	RECODE PinterestAds (1=2) (2=1)	RECODE TwitterAnalysis (1=3) (3=1)
RECODE ReferSites (1=3) (3=1)	RECODE TwitterAds (1=2) (2=1)	RECODE InstagramAnalysis (1=3) (3=1)
RECODE Email (1=3) (3=1)	RECODE InstagramAds (1=2) (2=1)	RECODE GoogleAlerts (1=3) (3=1)
RECODE Enewsletter (1=3) (3=1).	RECODE SnapchatAds (1=2) (2=1)	RECODE PinterestAnalysis (1=3) (3=1)
RECODE Blog (1=3) (3=1)	RECODE TripAdvisorAds (1=2) (2=1)	RECODE YouTubeAnalysis (1=3) (3=1)
RECODE Facebook (1=3) (3=1)	RECODE BookingcomAds (1=2) (2=1)	RECODE BookingcomAnalysis (1=3) (3=1)
RECODE Pinterest (1=3) (3=1)	RECODE YouTubeAds (1=2) (2=1)	RECODE EmailAnalysis (1=3) (3=1)
RECODE Twitter (1=3) (3=1)	RECODE GoogleAdwords (1=2) (2=1)	RECODE GoogleAnalytics (1=3) (3=1)
RECODE Instagram (1=3) (3=1)	RECODE GooglePlusAds (1=2) (2=1)	RECODE TripAdvisorAnalysis (1=3) (3=1)
RECODE Snapchat (1=3) (3=1)	RECODE LinkedInAds (1=2) (2=1)	RECODE EnewsletterAnalysis (1=3) (3=1)
RECODE TripAdvisor (1=3) (3=1)	RECODE ReferSitesAds (1=2) (2=1)	RECODE LinkedInAnalysis (1=3) (3=1)
RECODE Bookingcom (1=3) (3=1)		
RECODE YouTube (1=3) (3=1)		
RECODE GoogleMyBus (1=3) (3=1)		
RECODE GooglePlus (1=3) (3=1)		
RECODE LinkedIn (1=3) (3=1)		

Table B: Use of digital marketing technology response recoding
RECODE DSIStoredb (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DSIIntegrate (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DSIAnalysisLink (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DSIRevByChannel (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DSIDataSummary (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE CDAMarketInfoWeb (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE CDACustDataAnalysis (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE CDALatestCustInfo (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE CDATestMarketing (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE CDAInformTargets (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DMDaily (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DMPlanning (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DMContent (1=4) (2=3) (3=2) (4=1) (5=-999)
RECODE DMResponsive (1=4) (2=3) (3=2) (4=1) (5=-999
RECODE DMUseFeedback (1=4) (2=3) (3=2) (4=1) (5=-999)

Table C: Created variables for adoption and use of digital marketing technology
COMPUTE DigitalChannels=SUM (WebBooking, WebNoBooking, ReferSites, Email, Enewsletter, Blog, Facebook, Pinterest, Twitter, Instagram, Snapchat, TripAdvisor, Bookingcom, YouTube, GoogleMyBus, GooglePlus, LinkedIn).
COMPUTE DigitalPaid=SUM (FacebookAds, PinterestAds, TwitterAds, InstagramAds, SnapchatAds, TripAdvisorAds, BookingcomAds, YouTubeAds, GoogleAdwords, GooglePlusAds, LinkedInAds, ReferSitesAds).
COMPUTE DigitalAnalysis=SUM (FacebookInsights, TwitterAnalysis, InstagramAnalysis, GoogleAlerts, PinterestAnalysis, YouTubeAnalysis, BookingcomAnalysis, EmailAnalysis, GoogleAnalytics, TripAdvisorAnalysis, EnewsletterAnalysis, LinkedInAnalysis).
COMPUTE HoursValue=SUM(DigitalHours*7*12).
COMPUTE Digital_Invest=SUM(DigitalMktgInt, DigitalMktgExt, DigitalDailyInt, DigitalDailyExt, DigitalAnalysisInt, DigitalAnalysisExt, HoursValue).

Table D: Attitude towards digital marketing technology response recoding
RECODE AWBenefits (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE AWSeekNew (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE AWKeepUp (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE AWCustomerPref (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE AWToolsAvailable (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE KNMeasureROI (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE KNEasyLearn (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE KNNewCustomers (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE KNContribute (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE KNUseProven (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE EXUsedifferent (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE EXCreateOpps (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE EXUseDecisions (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE EXTrial (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE EXConfidentNew (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PVDataEasyManage (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PVEasyCRM (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PVImprovesMCQual (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PVImportanceGrow (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PVExtraCosts (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)

Table E: EMO first order construct response recoding
RECODE CICommunicate (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE CIResponseTarget (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE CIReflectCustWants (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE CIMktgBuildCRM (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE CIUseCustProfile (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE VCCompAdvantage (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE VCDataToInsight (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE VCDataToImprove (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE VCChangeForValue (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE VCCustDriveMktg (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)

RECODE RISpendUncertainty (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RIRiskToImprove (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RIBenefitWillInvest (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RIDataSecurity (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RLDigitalStaff (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RLWorkInLimits (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RLUseAllData (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RLUseNetwork (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE RLWiderNetwork (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PRGoExternal (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PRReviewMktg (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PRReviewCompetitors (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PRUptodateIndustry (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE PRGuideExperience (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE OFUseMktKnowledge (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE OFRespondUnpredicted (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE OFReactToCompetition (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE OFAlwaysPursue (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE OFIdentifyThruDigital (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE INTryNewIdeas (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE INTryImproveService (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE INMktgWillChange (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE INLearnThruFailure (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE INDigitalChangeMktg (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE REFDataInsightGrowth (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)
RECODE REFNewMktgLeader (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)

Table F: Coding the marketing activity low risk statement
RIMktgLowRisk (1=6) (2=5) (3=4) (4=3) (5=2) (6=1)

Appendix E Retained Analysis Model First Order Constructs, Labels and Measurement Items

Entrepreneurial Marketing Orientation

Construct	Indicator Label	Indicator
Customer Value **(CV)**	CIMktgBuildCRM	Relationships with customers are built through our marketing activities
	CIReflectCustWants	The marketing activities of this business reflect the knowledge of what our customers want
	VCChangeForValue	I change suppliers or partners when necessary to create value for customers
	VCCustDriveMktg	Marketing activity is driven by information from our customers
Innovation Focus **(IN)**	INDigitalChangeMktg	Digital technology has changed our marketing activities
	INLearnThruFailure	I accept that failure can contribute to learning for the future
	INMktgWillChange	I believe that our marketing activities will change in the future
	INTryImproveService	I am always looking at ways to improve the services this business provides
Risk Management **(RI)**	RIBenefitWillInvest	If I know what the benefits of new technology are, I will invest in it
	RIRiskToImprove	It is necessary to take risks to improve the service we provide
	RISpendUncertainty	In uncertain times, I spend more on marketing
Resource Leveraging **(RL)**	RLDigitalStaff	Our staff have digital marketing skills that I am able to use when I need to
	RLUseAllData	I use all the customer data available to me for marketing decisions
	RLUseNetwork	I use my business network to develop new ideas for customer marketing

Adoption and Use of Digital Marketing Technology

Construct	Indicator Label	Indicator
Digital Applications **(APPS)**	DigitalChannels	Digital Marketing Applications
	DigitalAnalysis	Digital Marketing Analysis Applications
	DigitalPaid	Paid Digital Marketing Channels
Investment **(INV)**	Digital_Invest	Monetary investment in digital marketing technology
	HoursValue	Value of time invested in digital marketing technology

Adoption and Use of Digital Marketing Technology continued

Construct	Indicator Label	Indicator
Customer Data Storage and Integration **(DSI)**	DSIDataSummary	Customer data summaries are visualised for each of the digital marketing channels we use
	DSIIntegrate	Our online booking system provides revenue data from different digital channels
	DSIStoredb	Customer data from different marketing activities are stored in a customer database
(Digital Customer) Data Insight **(DI)**	CDACustDataAnalysis	Customer data from digital marketing channels is analysed
	CDATestMarketing	Digital marketing campaigns are tested to maximise customer response
	DMDaily	Digital customer data guides day-to-day marketing communication activities

Attitude Towards Digital Marketing Technology

Construct	Indicator Label	Indicator
Knowledge **(KN)**	AWCustomerPref	I am aware of my customers preferred digital communication channels
	AWToolsAvailable	I am aware of the digital tools available to me for marketing communication
	EXConfidentNew	I am confident using digital marketing technology that is new to me
	EXTrial	I try new digital marketing applications before I buy into them
	EXUseDecisions	I draw upon personal experience for all my digital marketing communication decisions
	EXUsedifferent	I am experienced in using different digital marketing technologies
	KNEasyLearn	Learning about new digital marketing technology is easy for me
	KNMeasureROI	I know how to measure the return on my investment in digital marketing technology
Perceived Value **(PV)**	PVDataEasyManage	Customer data from digital channels is easier to manage than other forms of customer data
	PVEasyCRM	It is easy to build customer relationships using digital technology
	PVImprovesMCQual	Digital technology improves the quality of our marketing communication